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THE

NATURAL HISTORY

OF

B I R D S.

FROM THE FRENCH OF THE

COUNT DE BUFFON.

34057
a

ILLUSTRATED WITH ENGRAVINGS;

AND A

PREFACE, NOTES, AND ADDITIONS,

BY THE TRANSLATOR.

IN NINE VOLUMES.

VOL. VI.

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CONTENTS

OF THE

SIXTH VOLUME.

	Page
THE *Fly-Bird*	1
The Leaſt Fly-Bird	10
The Ruby	12
Amethyſt	15
Gold Green	16
Tufted Neck	17
Ruby Topaz	19
Creſted Fly-Bird	22
Racket Fly-Bird	23
Purple Fly-Bird	24
Gold Cravat	25
Sapphire	26
Emerald Sapphire	*ib.*
Amethyſt Emerald	27
Carbuncle	28
Gold Green	29
Spotted-necked Fly-Bird	30
Emerald Ruby	31
Eared Fly-Bird	*ib.*
Collared Fly-Bird	33
Broad-ſhafted Fly-Bird	34

Page

The Long-tailed Steel-coloured Fly-Bird — 35
Forked-tail Violet Fly-Bird — 36
Long-tail Fly-Bird — — 57
Black Long-tailed Fly-Bird — 38
The Colibri — — — 40
Topaz Colibri — — 44
Garnet — — — 46
White Shaft — — *ib.*
Zitzil, or Dotted Colibri — 47
Blue Shaft — — 48
Green and Black Colibri — — 50
Tufted Colibri — — 51
Violet-tailed Colibri — — 52
Green-throated Colibri — — 53
Carmine-throated Colibri — 54
Violet Colibri — — 55
Green Gorget — — — 56
Red Collar — — — 57
Black Plaſtron — — 58
White Plaſtron — — — 59
Blue Colibri — — *ib.*
Pearl Green — — — 60
Ruſty-bellied Colibri — — 61
Little Colibri — — — *ib.*
The Parrot — — — 63
PARROTS *of the Old Continent* — 80
The Cockatoos — — — *ib.*
White-creſted Cockatoo — — 82
Yellow-creſted Cockatoo — — 83
Red-creſted Cockatoo — — 85
Little Fleſh-billed Cockatoo — — 85
Black Cockatoo — — 87
The PARROTS *properly ſo called* — — 88

The

Page

The Jaco, or Cinereous Parrot — — 88
Green Parrot — — 102
Variegated Parrot — — 103
Vaza, or Black Parrot — — 104
Maſcarine — — — 105
Bloody-billed Parrot — — 107
Great Blue-headed Green Parrot — 108
Grey-headed Parrot — — *ib.*
The Loris — — — 110
Noira-Lori — — 111
VARIETIES *of the Noira* — — 113
1. The Java Parrot — — — ib.
2. The Ceram Lori — — ib.

The Collared Lori — — 114
Tricolor Lory — — 115
Crimſon Lory — — — 116
Red Lory — — 117
Red and Violet Lory — — 118
Great Lory — — 119
The Parrakeet Loris — — 120
Red Parrakeet Lory — — *ib.*
Violet and Red Parrakeet Lory — 121
Tricolor Parrakeet Lory — — 122
PARRAKEETS *of the Old Continent, in which the Tail is long and equally tapered* — 123
The Great Collared Parrakeet — *ib.*
Double Collared Parrakeet — — 125
Red-headed Parrakeet — — 126
Blue-headed Parrakeet — *ib.*
Lory Parrakeet — — 127
Yellow Parrakeet — — 128
Azure-headed Parrakeet — 129

Page

The Mouſe Parrakeet — — 129
Muſtacho Parrakeet — — 130
Blue-faced Parrakeet — — 131
Lace-winged Parrakeet — — 132
PARRAKEETS *of the Old Continent, which have a long and unequal Tail* — 134
The Roſe-ringed Parrakeet — — *ib.*
Little Parrakeet — — 135
Long-ſhafted Great Parrakeet — 136
Reddiſh-winged Great Parrakeet — 137
Red-throated Parrakeet — — 138
Black-banded Great Parrakeet — 139
Red and Green Parrakeet — — 140
Creſted Parrakeet — — 141
Short-tailed PARRAKEETS *of the Old Continent* 142
The Blue-headed Parrakeet — 143
Red-headed Parrakeet — — 145
Coulaciſſi — — 148
Golden-winged Parrakeet — — 149
Gray-headed Parrakeet — — 150
Variegated-winged Parrakeet — 151
Blue-winged Parrakeet — — 152
Collared Parrakeet — — 152
Black-winged Parrakeet — 153
Arimanon — — 154
PARROTS *of the New Continent* — 156
The Aras — — — *ib.*
Red Ara — — 158
Blue Ara — — 168
Green Ara — — — 169
Black Ara — — 175
The Amazons and Cricks — — 177
The Amazon Parrots — — 182

The

Page

The Blue-winged Promerops — — 400
Brown Promerops with ſpotted Belly — 401
Striped-bellied Brown Promerops — 402
Great Promerops with friſzled Flounces 403
Orange Promerops — — 405
The Baker — — 407
The Polochion — — — 408
The Red and Blue Merops — — 409
The Bee-Eater — — 411
Yellow and White Bee-Eater — 418
Gray-headed Bee-Eater — — 419
Gray Bee-Eater of Ethiopia — 420
Cheſnut and Blue Bee-Eater — *ib.*
VARIETY *of this bird* — — 421
The Cheſnut and Blue Bee-Eater of Senegal ib.

The Patirich — — 422
The Green Blue-throated Bee-Eater — 424
Green and Blue Yellow-throated Bee-Eater 427
Little Green and Blue taper-tail Bee-Eater 428
Azure-tailed Green Bee-Eater — 429
Blue-headed Red Bee-Eater — 430
Red and Green Bee-Eater of Senegal — 431
Red-headed Bee-Eater — — 432
Green Bee-Eater with rufous Wings and Tail 433
Iſterocephale, or Yellow-headed Bee-Eater 434
The European Goat-Sucker — — 436
FOREIGN BIRDS *which are related to the Goat-Sucker* — — 443
1. The Carolina Goat-Sucker — 448
2. The Whip Poor Will — — 450
3. The Guira-Querea — — 452
4. The Ibijau — — — 455

VARIETIES

Page

VARIETIES *of the Ibijau* — — 455
The Little Spotted Goat-Sucker of Cayenne ib.
The Great Ibijau — — 456
5. The Spectacle Goat-Sucker, or the Haleur 458
6. The Variegated Goat-Sucker of Cayenne 459
7. The Sharp-tailed Goat-Sucker — 461
8. The Gray Goat-Sucker — — 462
9. The Montvoyau of Guiana — 463
10. The Rufous Goat-Sucker of Cayenne — 464

The Swallows — — — 466
The Chimney, or Domeſtic Swallow — 493
VARIETIES *of the Common Swallow* — 505
1. The Atingua Swallow — — ib.
2. The Rufous-bellied Swallow of Cayenne — ib.
3. The Ruſous-cowled Swallow — 506

FOREIGN BIRDS, *which are related to the Common Swallow* — — — 508
1. The Great Rufous-bellied Swallow of Senegal ib.
2. The White-cinctured Swallow — 509
3. The Ambergris Swallow — — 510

The Martin — — — 512
The Sand Martin — — 526
The Crag Swallow — — 532
The Swift — — — 534
White-bellied Swift — — 548
FOREIGN BIRDS *which are related to the Swallows, the Martins, and the Swifts* — 552
1. The Black Swallow — — 554
2. The White-bellied Swift — 555
3. The Peruvian Swallow — — 557
4. The White-collared Swift — 558
5. The Aſh-bellied Swallow — — 560
6. The Blue Swallow of Louiſiana — ib.

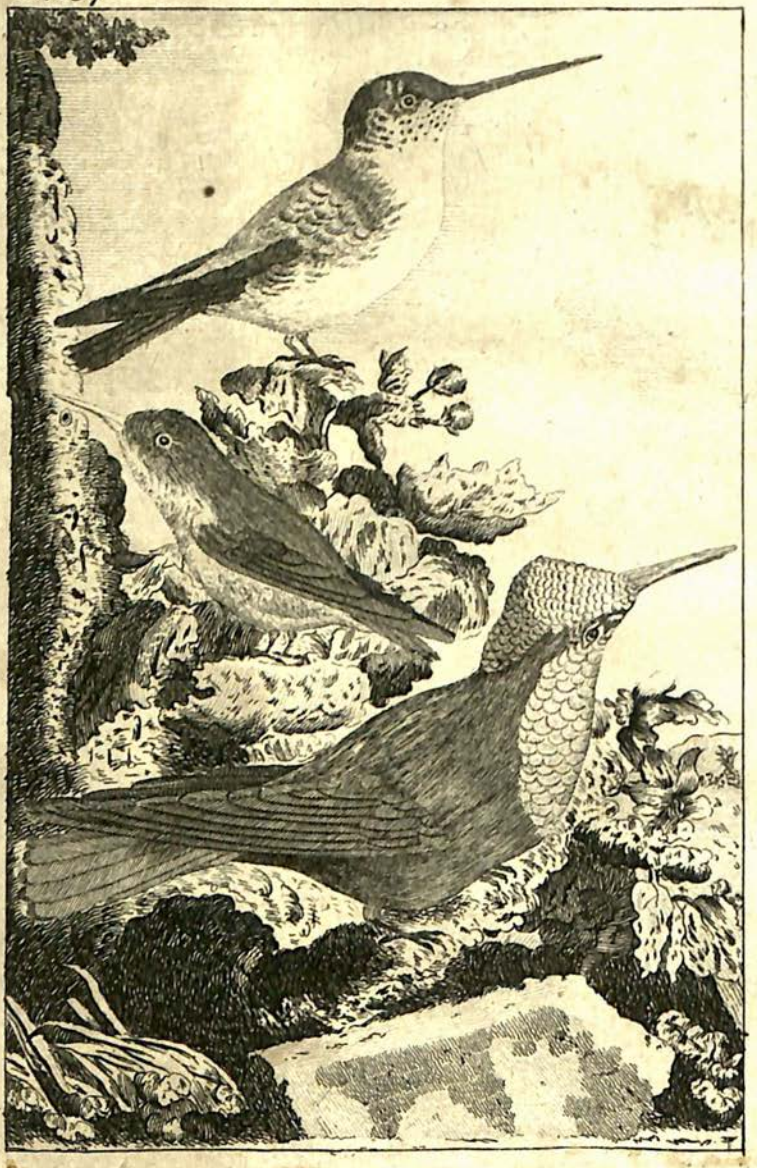
VARIETIES

CONTENTS.

	Page
VARIETIES *of this Bird* — —	561
The Cayenne Swallow — —	ib.
The South American Swallows —	562
The Purple Martin — —	563
The Great American Martin —	ib.
7. The Braſilian Swallow — —	564
8. The Brown-collared Swallow —	566
9. The White-bellied Cayenne Swallow —	567
10. The Eſculent Swallow — —	568
11. The Wheat Swallow — —	578
VARIETY *of this Bird* — —	579
The Little Brown Swallow —	ib.
12. The Gray-rumped Swallow — —	580
13. The Rufous-rumped Swallow —	581
14. The Sharp-tailed Brown Swallow of Louiſiana	582
15. The Sharp-tailed Black Swallow of Martinico	585

THE

N°137



FLY-BIRDS OF THE NATURAL SIZE.

THE

NATURAL HISTORY

OF

BIRDS.

The FLY-BIRD.

L'Oiſeau Mouche,* Buff.

OF all animated beings, the Fly-bird is the moſt elegant in its form, and the moſt brilliant in its colours. The precious ſtones and metals poliſhed by our art cannot be compared to this jewel of nature. Her miniature

* In Spaniſh *Tomineios:* in Peruvian *Quinti* or *Quindé*, which name obtains alſo in Paraguay: in Mexican *Huitzitzil* or *Hoitzitzil*, *Ouriſſia* (ſun-beam): in Brazilian *Guainumbi*, which is generic. It is alſo called *Vicililin* and *Guacbichil* (flower-ſucker) in Mexico. Briſſon terms it *Melliſuga* or honey-ſucker; Linnæus *Trochilus*, or little-top. In Engliſh it is uſually known by the name of *humming-bird*. Mr. Pennant denominates it *honey-ſucker*.

[The Mexican appellations of *Huitzitzil* and *Vicililin*, ſignify *regenerated*; which alludes to a notion entertained by the Indians that in autumn this bird ſtuck its bill into the trunk of a tree, and remained inſenſible during the winter months, till the vernal warmth again waked it to animation, and invited it to its flowery paſture. T.]

productions are ever the moſt wonderful; ſhe has placed it in the order of birds, at the bottom of the ſcale of magnitude; but all the talents which are only ſhared among the others, nimbleneſs, rapidity, ſprightlineſs, grace, and rich decoration, ſhe has beſtowed profuſely upon this little favourite. The emerald, the ruby, the topaz, ſparkle in its plumage, which is never ſoiled by the duſt of the ground. It inhabits the air; it flutters from flower to flower; it breathes their freſhneſs; it feeds on their nectar, and reſides in climates where they blow in perpetual ſucceſſion.

It is in the hotteſt part of the new world that all the ſpecies of Fly-birds are found. They are numerous, and ſeem confined between the two tropics *; for thoſe which penetrate in ſummer within the temperate zones make but a ſhort ſtay. They follow the courſe of the ſun; with him they advance or retire; they fly on the wings of the zephir, to wanton in eternal ſpring.

The Indians, ſtruck with the dazzle and glow of the colours of theſe brilliant birds, have named them the *beams or locks of the ſun* †. The Spaniards call them *tomineos*, on account of their diminutive ſize, *tomine* ſignifying a weight of twelve grains. "I ſaw," ſays Nieremberg, "one of theſe birds weighed with its

* Laet. *Ind. Occid.* Lib. V. 256. † Marcgrave.

neſt,

neſt, and the whole together did not amount to two tomines *." The ſmaller ſpecies do not exceed the bulk of the great gad-fly, or the thickneſs of the drone. Their bill is a fine needle, and their tongue a delicate thread; their little black eyes reſemble two brilliant points; the feathers of their wings are ſo thin as to look tranſparent †; hardly can the feet be perceived, ſo ſhort they are and ſo ſlender: and theſe are little uſed, for they reſt only during the night. Their flight is buzzing, continued, and rapid; Marcgrave compares the noiſe of their wings to the *whirr* of a ſpinning-wheel: ſo rapid is the quiver of their pinions, that when the bird halts in the air, it ſeems at once deprived of motion and of life. Thus it reſts a few ſeconds beſide a flower, and again ſhoots to another like a gleam. It viſits them all, thruſting its little tongue into their boſom, and careſſing them with its wings; it never ſettles, but it never quite abandons them. Its playful inconſtancy multiplies its innocent pleaſures; for the dalliance of this little lover of flowers never ſpoils their beauty. It only ſips their honey, and its tongue ſeems calculated for that purpoſe: it conſiſts of two hollow fibres, forming a ſmall canal ‡, parted at the end into two

* Nieremberg, p. 239. Acoſta, Lib. IV. cap. 37.
† Marcgrave. ‡ Macrgrave.

 filaments:

filaments*: it reſembles the proboſcis of inſects, and performs the ſame office †. The bird protrudes it from its bill, probably by a mechaniſm of the *os hyoides*, ſimilar to what obtains in the tongue of wood-peckers. It thruſts it to the bottom of the flowers, and ſucks their juices. Such is its mode of ſubſiſting according to all the authors who have written on the ſubject ‡. One perſon alone denies the fact; he is Badier §, who, finding in the œſophagus ſome portions of inſects, concludes that the bird lives on theſe, and not the nectar of flowers. But we cannot reject a number of reſpectable authorities for a ſingle haſty aſſertion; though the Fly-bird ſwallow ſome inſects, does it thence follow that it ſubſiſts upon them? Nay, muſt it not neceſſarily happen, that, ſucking the honey from the flowers, or gathering their pollen, it will ſometimes ſwallow the little inſects which are entangled? Beſides, the rapid waſte of its ſpirits, the conſequence of its extreme vivacity and its rapid inceſſant motion, muſt continually be recruited by rich nutritious aliments: and Sloane, on whoſe obſervations I lay the greateſt ſtreſs, poſitively avers

* Labat, t. IV. 13.

† Natural Hiſtory of Guiana, p. 165.

‡ Garcilaſſo, Gomara, Hernandez, Cluſius, Nieremberg, Marcgrave, Sloane, Cateſby, Feuillée, Labat, Dutertre, &c.

§ Journal de Phyſique, *Janvier* 1778, p. 32.

that

that he found the ſtomach of the Fly-bird entirely filled with the pollen, and ſweet juice of flowers *.

Nothing can equal the vivacity of theſe little creatures, but their courage, or rather audacity; they furiouſly purſue birds twenty times larger than themſelves, fix in the plumage, and as they are hurried along ſtrike keenly with the bill, till they vent their feeble rage †: ſometimes even they fight obſtinately with each other. They are all impatience; if upon alighting in a flower they find it faded, they will pluck the petals with a precipitation that marks their diſpleaſure. Their voice is only a feeble cry *ſcrep*, *ſcrep*, which is frequent and reiterated ‡. They are heard in the woods at the dawn of the morning §, and as ſoon as the ſun begins to gild the ſummits of the trees, they take wing and diſperſe in the fields.

They are ſolitary ‖; and indeed, fluttering irregular in the breeze, they could hardly aſſociate. But the power of love ſurmounts the elements, and, with its golden chains, it binds all animated beings. The Fly-birds are ſeen to pair in the breeding ſeaſon; their neſt correſ-

* Nat Hiſt. Jamaica, p. 307.

† Browne, p. 475; Charlevoix, *Nouvelle France*, t. III. p. 158; Dutertre, *t.* II. *p.* 263.

‡ Marcgrave compares this note, for its continuance, to that of the ſparrow, *p.* 196.

§ Marcgrave, *p.* 196.

‖ Philoſophical Tranſactions, *No.* 200, *art.* 5.

ponds to the delicacy of their bodies; it is formed with the ſoft cotton or ſilky down gathered from flowers, and has the conſiſtency and feel of a thick ſmooth ſkin. The female performs the work, and the male collects the materials *. She applies herſelf with ardour; ſelects, one by one, the fibres proper to form the texture of this kindly cradle for her progeny; ſhe ſmooths the margin with her breaſt, the inſide with her tail; ſhe covers the outſide with bits of the bark of the gum tree, which are ſtuck to ſhelter from the weather, and give ſolidity to the fabric †: the whole is attached to two leaves, or a ſingle ſprig of the orange or citron ‡, or ſometimes to a ſtraw hanging from the roof of an hut §. The neſt is not larger than the half of an apricot ||, and it is alſo ſhaped like a half cup. It contains two eggs, which are entirely white, and not exceeding the bulk of ſmall peaſe. The cock and hen ſit by turns twelve days; on the thirteenth the young are excluded, which are then not larger then flies. "I could never perceive," ſays Father Dutertre, "how the mother fed them, except that ſhe preſented the tongue covered entirely with honey extracted from flowers."

We may eaſily conceive that it is impoſſible to raiſe theſe little flutterers. Thoſe who have

* Dutertre, *t.* II. *p.* 262.
† *Id. Ibid.*
‡ Browne.
§ Dutertre.
|| Feuillée *Journal d'Obſervations*, t. I. p. 413.

tried

tried to feed them with ſyrups could not keep them alive more than a few weeks; theſe aliments, though of eaſy digeſtion, are very different from the delicate nectar collected from the freſh bloſſoms. Perhaps honey would have ſucceeded better.

The method of obtaining them is to ſhoot with ſand, or by means of the *trunk-gun*; they will allow one to approach within five or ſix paces of them *. They may be caught by placing a twig ſmeared over with a clammy gum in a flowering ſhrub. It is eaſy to lay hold of the little creature while it hums at a bloſſom. It dies ſoon after it is caught †, and ſerves to decorate the Indian girls, who wear two of theſe charming birds, as pendants from their ears. The Peruvians had the art of forming their feathers into pictures, whoſe beauty is perpetually extolled in the older narratives ‡. Marcgrave, who ſaw ſome of theſe pieces of workmanſhip, admires their brilliancy and delicacy.

With the luſtre and gloſs of flowers, theſe pretty birds have been ſuppoſed to have alſo the perfume; and many authors have aſſerted that

* They are ſo numerous, ſays Marcgrave, that a fowler may eaſily take ſixty in a day.

† Dutertre and Marcgrave.

‡ *See* Ximenes, who attributes the ſame art to the Mexicans: Gemelli Carreri, Thevet, Lery, Hernandez, &c.

they have the fragrance of muſk. The miſtake originated probably from the name applied by Oviedo, of *paſſer moſquitus*, which would eaſily be changed into *paſſer moſcatus* *. But this is not the only marvellous circumſtance with which their hiſtory has been clouded †; it has been ſaid that they are half birds, half flies, and produced from a fly ‡; and a Provincial of the Jeſuits gravely affirms in Cluſius, that he was witneſs to this transformation §. It has been alledged that during the winter ſeaſon they remain torpid, ſuſpended by the bill from the bark of a tree, and awakened into life when the flowers begin to blow. Theſe fictions have been rejected by intelligent naturaliſts ||; and Cateſby aſſures us, that he ſaw them through the whole year at St. Domingo and Mexico, where nature never entirely loſes her bloom ⸸. Sloane ſays the ſame of Jamaica, only that they are more numerous after the rainy ſeaſon; and prior to both, Marcgrave

* Geſner very juſtly remarks that this epithet is derived rather from *muſca* (a fly), than from *moſchus* (the name in modern Latin for muſk.)

† Dutertre corrects very judiciouſly many puerile exaggerations, and detects, as uſual, the miſtakes of Rochefort, *t.* II. *p.* 263.

‡ *See* Nieremberg, *p.* 240.

§ This Jeſuit, ſays Cluſius, made ſtrange relations in natural hiſtory. *Exotic, p.* 96.

|| See *Willoughby*.

⸸ Nat. Hiſt. of Carolina, *Vol.* I. *p.* 65.

mentioned

mentioned their being frequent the whole year in the woods of Brazil.

We are acquainted with twenty-four ſpecies in the genus of the Fly-bird; and it is probable ſome have been overlooked. We ſhall diſtinguiſh them by their different denominations, drawn from the moſt obvious characters.

The LEAST FLY-BIRD.

Le plus petit Oiſeau-Mouche, Buff.

FIRST SPECIES.

Trochilus Minimus, Linn. Gmel. and Klein.
Melliſuga, Briſſ.
Guainumbi ſeptima ſpecies, Marcq.
Guainumbi minor, corpore toto cinereo, Ray.
Polythmus minimus variegatus, Brown.
The *Leaſt Humming-bird*, Sloane, Edw. and Lath.

IT is congruous to begin with the ſmalleſt ſpecies, in enumerating the ſmalleſt genus. This Leaſt Fly-bird is ſcarce fifteen lines in length; its bill is three and a half, its tail four: ſo that there remains only nine lines for the head, the neck, and the body. It is ſmaller, therefore, than ſome of our flies. All the upper ſide of the head and body is of a gold green changing brown, and with reddiſh reflections; all the under ſide is of a white grey. The feathers of the wing are brown, inclining to violet, and this is the general colour of the wings in all the Fly-birds, as well as in the colibris. The bill alſo and the feet are commonly black, the legs are clothed pretty low with little downy plumules; and the toes are furniſhed with little ſharp curved nails. All of them have ſix feathers in the tail; Marcgrave mentions only four, which

is probably a miſtake of the tranſcriber. The colour of theſe tail-feathers is, in moſt of the ſpecies, bluiſh black, with the luſtre of burniſhed ſteel. In the female the colours are generally not ſo bright; it is acknowledged too by the beſt obſervers to be rather ſmaller than the male *. The bill of the Fly-bird is equally thick throughout, ſlightly ſwelled at the tip, compreſſed horizontally and *ſtraight*. This laſt character diſtinguiſhes the Fly-bird from the colibris, which moſt naturaliſts, and even Marcgrave, have confounded.

This firſt and leaſt ſpecies is found in Brazil and the Antilles. The bird was ſent to us from Martinico with its neſt; Edwards received it from Jamaica.

* Grew in the Philoſophical Tranſactions, *No.* 200, *art.* 5.—Labat, Dutertre.

[A] Specific character of the *Trochilus Minimus*: "Its lateral tail-feathers white at their outer edge, its body of ſhining green, below whitiſh." It weighs between twenty and forty-five grains.

The RUBY.

Le Rubis, Buff.

SECOND SPECIES.

Trochilus-Colubris, Linn. Gmel. and Klein.
Melliſuga Carolinenſis gutture rubro, Briſſ.
Tominco Viridcens, gutture flammeo, Petiv.
Guainumbi, Ray. and Will.
The *American Tomineius* or *Humming-bird*, Cateſby and Kalm.
The *Red-throated Honey-ſucker*, Penn.
The *Red-throated Humming-bird*, Edw. and Lath.

IN obſerving the ſcale of magnitude, many would occupy the ſecond place. We ſhall take the Carolina Fly-bird, and denominate it the *Ruby*. Cateſby feebly expreſſes the luſtre and beauty of the colour of its throat, when he calls it a *crimſon enamel:* it has the brilliancy and fire of the ruby. In a ſide view, it has a gold tinge, and, ſeen from below, it appears a dull garnet. We may remark that the feathers of the throat are faſhioned and diſpoſed like ſcales, round and detached; which arrangement multiplies the reflections, that play both on the neck and the head of the Fly-birds, among all their ſparkling feathers. In the preſent, all the upper ſide of the body is gold-green, changing into red copper; the breaſt and the fore part of the body are mixed with white,

white, grey, and blackiſh; the two feathers in the middle of the tail are of the colour of the back, and the lateral feathers are purple-brown; Cateſby ſays *copper colour*. The wing is brown, tinged with violet, which, as we have already obſerved, is the common colour of the wings in all theſe birds; ſo that we may omit them in the ſubſequent deſcriptions. The form of the wings is ſingular: Cateſby compares it to the blade of a Turkiſh ſcimeter. The four or five firſt outer quills are long, the next much leſs ſo, and thoſe neareſt the body are extremely ſmall; which, joined to another circumſtance, that the largeſt are curved outwards, makes the two wings when ſpread reſemble a drawn bow, of which the little body of the bird repreſents the arrow in the middle.

The Ruby appears in ſummer in Carolina, and even in New England; it is the only Fly-bird that penetrates into the northern provinces *. Some narratives tranſport it to Gaſpeſia †, and Charlevoix ſays that he ſaw it in Canada. But he appears little acquainted with it when he ſays, that the bottom of its neſt *is interwoven with ſmall bits of wood, and that it lays five eggs* ‡; and in another place that *its*

* Cateſby and Edwards.

† *Nouvelle relation de la Gaſpeſie*, par le R. P. Chretien le Clerque, *Paris*, 1691, *p.* 486. The Gaſpeſians, according to this account, call it *niridó*, bird of heaven.

‡ Hiſt. and Deſcrip. de la Nouv. France, *Paris*, 1744, *t.* III. 158.

feet

feet are like its bill, very long *. Little ſtreſs can be laid on ſuch evidence. The winter retreat is ſaid to be in Florida †; it breeds in Carolina in ſummer, and departs when the flowers begin to fade. It extracts its nouriſhment from the flowers only; "and I have always obſerved," ſays Cateſby, "that it never feeds on inſects, but entirely on honey-juices ‡."

* Hiſt. de St. Domingue, *Paris*, 1730, p. 31.
† *See* Hiſt. Gen. des Voy. *t.* XIV. *p.* 456.
‡ Carolina, Vol. I. p. 65.

[A] Specific character of the *Trochilus-Colubris*: "It is gold-green; its tail-feathers black, the three lateral ones ferruginous tipt with white; its throat flame coloured." It is three inches and one third long.

The AMETHYST, Buff.

Trochilus Amethyſtinus, Gmel.
The *Amethyſtine Humming-bird*, Lath.

THIRD SPECIES.

ALL the throat and the fore part of the neck are of a brilliant amethyſt, which it is impoſſible to figure or paint. This is one of the ſmalleſt of the Fly-birds; its ſize and form the ſame with thoſe of the Ruby; its tail is alſo forked. The fore ſide of the body is marbled with white, grey, and brown; the upper ſide is gold-green; the amethyſt colour of the throat changes into purple brown, when the eye is placed lower than the object. The wings ſeem rather ſhorter than in the other Fly-birds, and reach not the two middle feathers of the tail, which are however the ſhorteſt, and give it a forked ſhape.

[A] Specific character of the *Trochilus Amethyſtinus*: "It is gold-green, below variegated with aſh and brown, its throat amethyſtine." It is found in Cayenne.

The GOLD GREEN.

L'Orvert, Buffon.

FOURTH SPECIES.

Trochilus Viridiſſimus, Gmel.
The *All-green Humming-bird*, Lath.

GREEN and gold yellow ſparkle more or leſs in all the Fly-birds; but theſe fine colours cover the whole plumage of this, with a brilliancy and gloſs which the eye cannot enough admire. In certain poſitions it is pure dazzling gold; in others, it is a glazed green, which is not inferior to the luſtre of poliſhed metal. Theſe colours extend over the wings; the tail has the black hue of burniſhed ſteel *.

To this we ſhall refer the *All-green Humming-bird* of Edwards. We ſhall alſo refer the ſecond ſpecies of Marcgrave; its ſingular beauty, its ſhort bill, and the dazzle of gold, and of brilliant and reſplendent green, diſtinguiſh it ſufficiently. Briſſon makes this his ſixteenth ſpecies, under the name of the *Forked-tail Bra-*

* Specific character: "It is very green, its belly white, its tail ſteel-coloured."

zilian

zilian Honey-ſucker *; but he was not aware that Marcgrave repreſents its tail neither long nor forked. Its *tail is like the former*, ſays that author; and in the firſt ſpecies the tail is *ſtraight, only an inch long*, and does not exceed the wing.

The TUFTED-NECK.

Le Hupetol, Buff.

FIFTH SPECIES.

Trochilus Auratus, Gmel.
Trochilus Ornatus, Lath. Ind.
The *Tufted-necked Humming bird*, Lath. Syn.

THIS name marks a very ſingular character, which diſtinguiſhes this bird from all the reſt. Not only its head is ornamented with a pretty long rufous tuft; but on each ſide of the neck, below the ears, riſe ſeven or eight unequal feathers; the two longeſt, being ſix or ſeven lines, are rufous, and narrow throughout,

* *Trochilus Glaucopis*, Gmel.
Trochilus Frontalis, Lath.
Melliſuga Braſilienſis caudâ bifurcâ, Briſſ.
Guainumbi Major, Ray and Will.
The *Blue fronted Humming-bird*, Lath. Syn.

Specific character: "It is gold-green; its front ſky-blue, its vent white, its wing-feathers violet-brown, its feet feathered, its tail ſteel-coloured, and ſomewhat forked."

but the ends a little widened, and tipt with a green dot. The bird erects them reclining them back; while at reſt they lie flat on the neck, as alſo does the beautiful tuft: but they are all briſtled when it flies, and the bird appears quite round. The throat and the fore ſide of the neck are of a rich gold-green (if the eye be held much lower than the object, theſe brilliant feathers appear entirely brown); the head and all the upper ſide of the body green, with dazzling reflections of gold and bronze, as far as the white bar that croſſes the rump; beyond this, to the end of the tail, is ſpread a ſhining gold on a brown ground on the outer webs of the quills, and rufous on the inner ones; the under ſide of the body is gold-green brown; the lower belly, white. The Tufted-neck does not exceed the ſize of the Amethyſt; the female reſembles it, except that it has no tuft or external ears: the bar of the rump is ruſty, and ſo is the throat; the reſt of the under ſide of the body rufous, ſhaded with greeniſh; its back and the upper ſide of the head are as in the male, green with gold and bronze reflections.

The RUBY TOPAZ, *Buff.*

SIXTH SPECIES.

Trochilus Moſchitus. Linn. and Gmel.
Melliſuga Braſilienſis gutture topazino, Briſſ.
The *Trochilus with a ferruginous tail,* Bancroft.
The *Ruby-necked Humming-bird,* Lath.

OF all the birds of the genus, this is the moſt beautiful, ſays Marcgrave, and the moſt elegant: it has colours and the ſparkling fire of the Ruby and the Topaz: the upper ſide of its head and neck is as brilliant as a ruby; the throat, all the fore ſide of the neck, in the front view, dazzle like the Aurora Topaz of Brazil. The ſame parts, ſeen a little lower, reſemble unburniſhed gold, and ſtill lower, change into a dull green; the top of the neck and the belly are of a velvet black brown; the wing is violet brown; the lower belly white; the inferior coverts of the tail and its quills are of a fine gold-rufous, and tinged with purple; it is edged with brown at the end; the rump is brown, heightened with gold-green; the wings, when cloſed, do not extend beyond the tail, whoſe quills are equal. Marcgrave remarks that it is broad, and that the bird diſplays it gracefully in flying. It is pretty large for its kind. Its total length is three inches and from four to ſix lines; its bill is ſeven or eight; Marcgrave calls this *half an*

inch. This beautiful ſpecies ſeems numerous, and has become common in the cabinets of naturaliſts: Seba ſays that he received many of them from Curaçoa. We may notice a character which all the Fly-birds and Colibris have, viz. that the bill is thick feathered at its baſe, and ſometimes as far as the fourth or third of its length.

The female has only a ſtreak of gold or topaz, on the throat and fore-part of the neck; the reſt of the under ſide of the body is white-gray [A].

We conceive that the Fly-bird repreſented, No. 640, fig. 1*, *Planches Enluminées*, is a proximate ſpecies, or perhaps the ſame with this; for the only difference conſiſts in its having a creſt, but which is not much raiſed. In other reſpects, the reſemblance is ſtriking; and, from a compariſon of the figures, the latter appears rather ſmaller and its colours not ſo deep, though the tints and diſtributions are eſſentially the

[A] Specific character of the *Trochilus Moſchitus*: "It is gold-green; its tail-feathers equal and ferruginous, the outermoſt tipt with brown; its wing-feathers black."

* *Trochilus Elatus*, Gmel.
Melliſuga Americana gutture topazino, Briſſ.
Floriſuga aut Melliſuga, Seba.
The *Ruby-creſted Humming bird*, Edw. and Lath.

Specific character: "It is gold-greeniſh, its tail-feathers equal and ferruginous, tipt with black; a red creſted cap."

ſame:

ſame: ſo that the one ſeems to be young, the other adult. Or perhaps it is a variety of climate; ſince the one comes from Cayenne, the other from Brazil. The *Ruby-creſted Humming-bird* given in Edwards's Gleanings correſponds exactly with the above-mentioned coloured figure. Friſch has alſo given the head of this Fly-bird, *pl.* 24, on which Briſſon has formed his ſecond ſpecies, taking, for the female, another figure inſerted by Friſch in the ſame place, and which repreſents a Little Gold-green Fly-bird. But the female of the Topaz-breaſted Fly-bird, whoſe body is brown, cannot ſurely be green. In this, as in every other genus of birds, the colours of the female are always duller than thoſe of the male. We may, therefore, with the higheſt probability, refer the *ſecond all-green Fly-bird* of Friſch to the gold-green.

The CRESTED FLY-BIRD.

L'Oiſeau-Mouche Huppé, Buff.

SEVENTH SPECIES.

Trochilus Criſtatus, Linn. Gmel. and Borowſk.
Melliſuga Criſtata, Briſſ. and Klein.
The *Green ſtrait-billed Humming-bird*, Bancroft.
The *Creſted Green Humming-bird*, Lath.

DUTERTRE and Feuillée have taken this bird for a *Colibri*; but it is one of the ſmalleſt of the Fly-birds, ſince it does not exceed the Ruby. Its creſt reſembles the moſt brilliant emerald; and this diſtinguiſhes it, for the reſt of its plumage is dull. The back has green and gold reflexions, on a brown ground; the wing is brown; the tail blackiſh, and ſhining like poliſhed ſteel; all the fore-ſide of the body is velvet brown, mixed with a little gold-green near the ſhoulders; the wing, when cloſed, does not exceed the tail. The under ſide of the bill is covered with little green brilliant feathers as far as the middle. Edwards has delineated the neſt. Labat obſerves that the female has no creſt.

[A] Specific character of the *Trochilus Criſtatus*: "It is green, its wings brown, its belly brown cinereous, its creſt bluiſh, its legs feathered."

The RACKET FLY-BIRD.

L'Oiſeau-Mouche à Raquettes, Buff.

EIGHTH SPECIES.

Trochilus Longicaudus, Gmel.
Trochilus Platurus, Lath. Ind.
The *Racket-tailed Humming-bird*, Lath. Syn.

Two naked ſhafts, extending from the two middle feathers of the tail, are terminated with little fans, which gives them the form of rackets. The ribs of all the quills of the tail are very thick, and of a ruſty white; the reſt is brown, like the wings. The upper ſide of the body is of a bronze green, which is the colour common to all the Fly-birds; the throat is of a rich emerald-green. The point of the bill is about thirty lines from the end of the true tail; the two ſhafts extend ten lines farther. This ſpecies is not well known, and ſeems very rare. We have deſcribed it from a ſpecimen in Mauduit's cabinet. It is one of the ſmalleſt Fly-birds, and, excluſive of the tail, it exceeds not the Tufted-neck.

[A] Specific character of the *Trochilus Longicaudus*: "It is gold green, its throat emerald; its wings, and its tail-feathers, brown, the two mid-ones very long."

The PURPLE FLY-BIRD.

L'Oiſeau-Mouche Pourpré, Buff.

NINTH SPECIES.

Trochilus Ruber, Linn. and Gmel.
Melliſuga Surinamenſis, Briſſ.
Melliſuga Alis Fuſcis, Klein.
The *Little Brown Humming-bird*, Edw. Banc. and Lath.

ALL the plumage of this bird is a mixture of orange, purple, and brown; and it is, perhaps, as Edwards obſerves, the only one of the genus that has not the gold-green on the back. Klein has therefore diſcriminated it imperfectly by the epithet of *brown-winged*; ſince brown, with more or leſs of violet and purple, is the general colour of the Fly-birds. The bill is ten lines, which is nearly one third of its length.

[A] Specific character of the *Trochilus Ruber*: "Its lateral tail feathers are violet; its body of a brown brick-colour, ſomewhat ſpotted."

The GOLD CRAVAT.

TENTH SPECIES.

Trochilus Leucogaſter, Gmel.
Melliſuga Cayanenſis ventre albo, Briſſ.
Guainumbi prima ſpecies, Ray and Will.
The *Larger Humming-bird*, Sloane.
The *Gold-throated Humming-bird*, Lath.

THIS ſeems to be the firſt ſpecies of Marcgrave; for it has a gold ſtreak on the throat, which that author thus deſcribes, "the fore-ſide of the body is white, mixed under the neck with ſome feathers of a ſhining colour." Briſſon omits that circumſtance in his eighth ſpecies, though it is formed upon the deſcription of Marcgrave's firſt. Its length is three inches and five or ſix lines; all the under ſide of the body, except the gold ſtreak on the fore-ſide of the neck, is white-grey, and the upper ſide gold-green [B]. We ſhall reckon Briſſon's ninth ſpecies* the female of this, there being no material difference between them.

[B] Specific character of the *Trochilus Leucogaſter*: "It is gold-green, below white, its legs feathered."

* *Trochilus-Pegaſus*, Gmel.
Melliſuga Cayanenſis, ventre griſeo, Briſſ.
The *Grey-bellied Humming-bird*, Lath.

It is thus deſcribed by Briſſon: "Above gold-green, varying with a pure copper colour; the feathers of the tail gold-green on their firſt half, varying with a pure copper colour, and dark purple on their other half, the lateral ones tipt with grey; the feet feathered."

The SAPPHIRE.

Le Saphir, Buff.

ELEVENTH SPECIES.

Trochilus Saphirinus, Gmel.
The *Sapphire Humming-bird*, Lath.

IT is rather above the middle ſize; the foreſide of the neck and breaſt is of a rich ſapphire-blue, with violet reflections; the throat is rufous; the upper and under ſides of the body dull gold-green; the lower belly white; the inferior coverts of the tail rufous; the ſuperior ones of a ſhining gold-brown; the quills of the tail are gold-rufous, edged with brown; thoſe of the wings brown; the bill is white, except the point, which is black.

The EMERALD-SAPPHIRE, *Buff.*

TWELFTH SPECIES.

Trochilus Bicolor, Gmel.
The *Sapphire and Emerald Humming-bird*, Lath.

THE two rich colours which decorate this bird deſervedly confer upon it the names of thoſe precious ſtones. A ſapphire blue covers the head and throat, and melts admirably

into the glazed emerald green, with gold reflexions that cover the breaſt, the ſtomach, the circle of the neck, and the back. The bird is middle ſized; it comes from Guadeloupe, and, we believe, has not hitherto been deſcribed. We have ſeen another, brought from Guiana, of the ſame bulk; but it had not the ſapphire throat, and the reſt of its body was of a very brilliant glazed green. Both theſe are depoſited with the firſt in the excellent cabinet of Mauduit. The laſt appears to be a variety, or at leaſt a ſpecies nearly related to the firſt. In both, the lower belly is white; the wing is brown, and exceeds not the tail, which is cut equally and rounded: it is black, with blue reflexions; their bill is pretty long, its lower half whitiſh, and upper black.

[A] Specific character of the *Trochilus Bicolor*; "It is gold-emerald; its head and throat ſky-blue."

The AMETHYST EMERALD.

THIRTEENTH SPECIES.

Trochilus-Ouriſſia, Linn. and Gmel.
Melliſuga Surinamenſis pectore cæruleo, Briſſ.
The *Green and Blue Humming-bird*, Edw. and Lath.

THIS Fly-bird is above the middle ſize; it is near four inches long, and its bill is eight lines. Its throat and the fore part of its neck

are

are emerald green, brilliant and golden; its breaſt, its ſtomach, and the top of its back, are purple blue amethyſt of the utmoſt beauty: the lower part of the back is gold-green, on a brown ground; the belly is white; the bill blackiſh; the tail velvet black, ſhining like poliſhed ſteel. To the ſame ſpecies we may refer the *Green and Blue Humming-bird* of Edwards, and the *Blue-breaſted Surinam Honey-ſucker* of Briſſon. It is figured rather larger in Edwards [B].

The CARBUNCLE.

L'Eſcarboucle, Buff.

FOURTEENTH SPECIES.

Trochilus Carbunculus, Gmel.
The *Carbuncle Humming-bird*, Lath.

A CARBUNCLE red, or deep ruby, is the colour of the throat and breaſt; the upper ſide of the head and neck is of a duller red; a velvet black envelopes the reſt of the body; the wing is brown, and the tail of a deep gold-ruſous. The bird is rather above the middle ſize; the bill, both above and below, is beſet with feathers, through almoſt one half of its length.

[B] Specific character of the *Trochilus Ouriſſia*: "It is golden-green, the feathers of its tail ſomewhat equal and gold-brown, the feathers of the wings black, its belly blue."

It

It was ſent from Cayenne, and ſeems to be very rare. Mauduit, in whoſe poſſeſſion it is, would refer it as a variety to the *Topaz-ruby*; but the difference between the topaz-yellow and the deep ruby on the throat of theſe two birds, ſeems too great to admit this claſſification. In all other reſpects, they are very ſimilar.—The preceding ſpecies, except the thirteenth, are new, and not deſcribed by any naturaliſt [A].

The GOLD-GREEN, *Buff.*

FIFTEENTH SPECIES.

Trochilus Melliſugus, Linn. and Gmel.
Guainumbi Nona Species, Ray and Will.
Melliſuga Cayanenſis, Briſſ.
The *Cayenne Humming-bird*, Lath.

THIS is the ninth ſpecies of Marcgrave; the whole body, ſays he, is of a brilliant green, with gold reflections; the upper mandible is black, the lower rufous; the wing is brown; the tail pretty broad, and ſhines like poliſhed ſteel. The total length of the bird exceeds ſomewhat three inches. The under ſide of the body has not ſo much green as the back, and is

[A] Specific character of the *Trochilus Carbunculus*: "It is black; its head, neck, and breaſt, red; its wings brown; its tail gold-rufous."

only

only marked with ſpots or waves of that colour. The female is rather ſmaller, as uſual in this tribe of birds [A].

THE SPOTTED-NECKED FLY-BIRD.

L'Oiſeau-Mouche a Gorge Tachetée, Buff.

SIXTEENTH SPECIES.

Trochilus Fimbriatus, Gmel.
Melliſuga Cayanenſis guttare nævio, Briſſ.
The *Spotted necked Humming-bird*, Lath.

THIS ſpecies is much related to the preceding. It is larger, and, but for that difference, we ſhould have aſſigned it the ſame place. Briſſon ſays that it is four inches long, and its bill eleven lines. Its plumage is exactly like that of the preceding *.

[A] Specific character of the *Trochilus Melliſugus*: "It is gold-green; its tail-feathers equal and blue, its wing-feathers dark bluiſh; its legs feathered."

* Specific character: "It is gold-green, below gray; its tail ſteel coloured, tipt with gray; the feathers of its breaſt fringed with white."

The EMERALD RUBY, *Buff.*

SEVENTEENTH SPECIES.

Trochilus Rubineus, Lath. Ind.
Melliſuga Braſilienſis gutture rubro, Briſſ.
The *Ruby-throated Humming-bird*, Lath. Syn.

THIS is much larger than the Carolina Ruby, being four inches four lines in length; its throat is of a ſparkling ruby, or, in certain poſitions, roſe colour; its head, its neck, the anterior and upper parts of its body, emerald green, with gold reflections; the tail is rufous. It is found both in Brazil and in Guiana [A].

The EARED FLY-BIRD.

L'Oiſeau-Mouche a Oreilles, Buff.

EIGHTEENTH SPECIES.

Trochilus Auritus, Gmel.
Melliſuga Cayanenſis Major, Briſſ.
The *Violet-eared Humming-bird*, Lath.

WE apply the epithet *eared* to this Fly-bird, both on account of the remarkable colour of the two pencils of feathers, which

[A] Specific character of the *Trochilus Rubineus*: "It is gold-green, its throat gold-red, its wings and tail rufous."

extend

extend behind the ears, and on account of their great length, which is twice or thrice that of the ſmall adjoining feathers that cover the neck. They ſeem only the production of what, in all birds, cover the *meatus auditorius*; they are ſoft, and their downy fibres not glued together. Theſe are the remarks of Mauduit, and well agree with his ingenious obſervation, which we formerly had occaſion to mention, viz. that all the feathers which appear ſuperabundant, or, ſo to ſpeak, paraſite, in birds are not peculiarities of ſtructure, but merely the extenſion and developement of parts common to all the others. The Eared Fly-bird is of the firſt magnitude, being four inches and a half long. Of the two pencils which diſtinguiſh the ears, and which conſiſt each of five or ſix feathers, the one is emerald-green, and the other amethyſt-violet; a ſtreak of velvet black ſtretches under the eye; all the fore part of the head and body is of a bright gold-green, which changes on the coverts of the tail into a very lively bright green; the throat and under ſide of the body are of a fine white; of the tail quills, the ſix lateral ones are of the ſame white, the four mid-ones black, inclining to deep blue; the wing is blackiſh, and the tail projects beyond it nearly one-third of its length. In the female, the pencils and the black ſtreak under the eye are leſs diſtinct; in other reſpects it reſembles the male.

The COLLARED FLY-BIRD,

Called the *Jacobine*.

NINETEENTH SPECIES.

Trochilus Mellivorus, Linn. Gmel. and Browſk.
Melliſuga Surinamenſis Torquata, Briſſ.
The *White-bellied Humming-bird*, Edw. and Lath.

THIS Fly-bird is of the firſt magnitude; it is four inches eight lines in length; its bill ten lines; its head, throat, and neck, of a fine obſcure blue, gloſſed with green; on the back of the neck, and near the back, is a white half collar; the back is gold-green; the tail white at the end, and edged with black; its two middle quills, and their coverts, gold-green; the breaſts and ſides the ſame; the belly white. It is probable, on account of this diſtribution, it has been called *Jacobine*. The two middle feathers of the tail are ſhorter than the reſt, and the wing, when cloſed, does not project beyond it. The ſpecies is found at Cayenne and Surinam.

[A] Specific character of the *Trochilus Mellivorus*: "Its tail-feathers are black, the lateral ones white; the head blue; the back green; the belly white."

The BROAD-SHAFTED FLY-BIRD.

L'Oiſeau-Mouche a Larges Tuyaux, Buff.

TWENTIETH SPECIES.

Trochilus Campylopterus, Gmel.
Trochilus Latipennis, Lath. Ind.
The *Broad-ſhafted Humming-bird*, Lath. Syn.

THIS bird and the preceding are the two largeſt of the genus. The preſent is four inches eight lines long; all the upper ſide of the body is of a faint gold-green; the under ſide grey; the middle feathers of the tail are like thoſe of the back; the lateral ones white at the tip, the reſt of a brown, reſembling poliſhed ſteel. It is eaſily diſtinguiſhed from the other Fly-birds by the protuberance of three or four great wing-quills, whoſe ſhafts appear ſwelled and dilated, bent near the middle, which gives the wing the ſhape of a broad ſabre. This ſpecies is new and apparently rare; and has not hitherto been deſcribed. We ſaw the ſpecimen in the cabinet of Maudüit, who received it from Cayenne.

[A] Specific character of the *Trochilus Campylopterus*: "It is gold-green; below grey; its lateral tail-feathers brown, tipt with white; the ſhafts of three or four of the middle feathers of the wings curved in the middle."

The LONG-TAILED STEEL-COLOURED FLY-BIRD. *Buff.*

TWENTY-FIRST SPECIES.

Trochilus Macrourus, Gmel.
Trochilus Forcipatus, Lath. Ind.
Melliſuga Cayanenſis cauda bifurca, Briſſ.
The *Cayenne fork-tailed Humming-bird*, Lath. Syn.

THE beautiful violet blue, which covers the head, throat, and neck, would ſeem to indicate an analogy to the ſapphire, did not length of the tail exhibit too great a difference. The two exterior quills are two inches longer than the two mid-ones; the lateral ones continually diminiſh, which makes the tail very much forked. The bird is dark blue, gliſtening like burniſhed ſteel; all the body, both above and below, is of a ſhining gold-green; there is a white ſpot on the lower belly; the wings, when cloſed, reach only to the middle of the tail, which is three inches and three lines; the bill is eleven lines, and the total length is ſix inches. The entire reſemblance between this deſcription and that which Marcgrave gives of his third ſpecies, convinces us that they are the ſame, contrary to the opinion of Briſſon, who makes it his twentieth ſpecies. But the third ſpecies of Marcgrave has *a tail more than three inches long*; whereas the twentieth Honey-

ſucker of Briſſon has it only *an inch and ſix lines:* and this is too wide a difference to occur in the ſame ſpecies. We ſhall conſider the bird of Briſſon in the following article [A].

The FORKED-TAIL VIOLET FLY-BIRD.

L'Oiſeau-Mouche Violet a Queue Fourchue, Buff.

TWENTY-SECOND SPECIES.

Trochilus Furcatus.
Melliſuga Jamacienſis Violacea cauda bifurca, Briſſ.
The *Leſſer fork-tail Humming-bird,* Lath.

BESIDES the difference of ſize, which, as we have already remarked, obtains between this and the preceding ſpecies, there is alſo a difference of colours. The upper parts of the head and neck are brown, gloſſed with gold-green, whereas theſe gliſten with blue in Marcgrave's third ſpecies. In the preſent, the back and breaſt are of a ſhining violet blue; in that of Marcgrave they are gold-green. The throat and the lower part of the back are brilliant gold-green; the ſmall coverts below the wings

[A] Specific character of the *Trochilus Macrourus:* "It is gold-green, its head and throat violet, its belly marked with a white ſpace, its tail forked and ſteel-coloured."

are

are of a fine violet, the great ones gold-green; their quills black: thoſe of the tail the ſame; the two exterior ones are the longeſt, which makes it forked; it is only an inch and half long; the bird meaſures four inches.

The LONG-TAIL FLY-BIRD,
Of Gold, Green, and Blue. *Buff.*

TWENTY-THIRD SPECIES.

Trochilus Forficatus, Lath. Gmel. and Browſk.
Falcinellus vertice caudaque cyaneis, Klein.
Melliſuga Jamaicenſis cauda bifurca, Briſſ.
The *Long-tailed Green Humming-bird*, Edw.
The *Fork-tailed Humming-bird*, Lath.

THE two exterior feathers of the tail of this Fly-bird are near twice as long as the body, and project above four inches. Theſe feathers, and all thoſe of the tail, of which the two middle ones are very ſhort, and not exceeding eight lines, are wonderfully beautiful and mingled, ſays Edwards, with reflections of green and of gold blue; the body is green; the wing is purple brown.—This ſpecies occurs in Jamaica.

[A] Specific character of the *Trochilus Forficatus*: "It is green, the lateral feathers of the tail very long, its cap and its tail feathers blue."

The BLACK LONG-TAILED FLY-BIRD. *Buff.*

TWENTY-FOURTH SPECIES.

Trochilus-Polytmus, Linn. and Gmel.
Falcinellus cauda ſeptem unciarum, Klein.
Melliſuga Jamaicenſis Atricapilla cauda bifurca, Briſſ.
The *Long tailed Humming-bird*, Albin.
The *Long-tailed Black-cap Humming-bird*, Edw. & Ban.
The *Black-capped Humming bird*, Lath.

THIS Fly-bird has a longer tail than any of the reſt; the two great feathers are four times as long as the body, which is ſcarcely two inches; theſe are alſo the two outermoſt; their webs conſiſt of parted downy fibres, and they are black like the crown of the head; the back is gold brown-green; the foreſide of the body green; the wings purple-brown. Albin's figure is a very bad one, and he was much miſtaken in ſuppoſing this to be the ſmalleſt ſpecies in the genus; though he ſays, that he found it in Jamaica in its neſt, which conſiſted of cotton [A].

We find in the Eſſay on the Natural Hiſtory of Guiana, mention of a little Humming-bird

[A] Specific character of the *Trochilus Polytmus*: "It is greeniſh, the lateral feathers of its tail very long, its cap and tail feathers brown."

with

with a blue creſt. We are unacquainted with it; and the account of it, and indeed of two or three others, is inſufficient to aſcertain their ſpecies. We may, however, be convinced that the genus of theſe handſome birds is ſtill richer and more multiplied in nature than we have delineated it.

The COLIBRI*.

WHEN nature beſtowed beauty ſo laviſhly on the fly-birds, ſhe neglected not their kindred tribe, the Colibris. Both inhabiting the ſame climate, faſhioned after the ſame model, and decorated by the ſame brilliancy of plumage: the ſame vivacity, the ſame perpetual flutter of action, and the ſame habits and economy. As their reſemblance is ſo entire, they have often been confounded under the ſame name: that of *Colibri* is adopted from the language of the Caribbees. Marcgrave applies to both indifferently the Brazilian appellation, *Guainumbi*. But they are diſtinguiſhed by an obvious and permanent character: in the Colibris the bill is equal and taper, inflated ſlightly near the end, and not ſtraight, as in the fly-birds, but curved throughout, and longer alſo in proportion. Further, the neat and ſlender form of the Colibris ſeems to be more lengthened than that of the fly-birds; and they are in general larger: yet there are ſome little Colibris ſmaller than the great fly-birds. The

* In the Brazilian language, the Fly-bird and the Colibri have the common name of *Guainumbi*: in Guiana, the Colibri is called in the dialect of Garipana *Toukouki*: and, according to Seba, certain tribes of Indians term it *Ronckjes*.

Colibris

N.° 138

COLIBRIS, OF THE NATURAL SIZE.

Colibris ſhould be ranged below the creepers, though they differ in the ſhape and length of their bill; in the number of the feathers of their tail, there being ten in the former and twelve in the latter; and in the ſtructure of their tongue, which is ſimple in the latter, but in the former divided into two ſemi-cylindrical portions, as in the fly-bird.

All naturaliſts agree that the Colibris and fly-birds have the ſame manner of living. It has, indeed, been denied that either of theſe tribes feed on the honey of flowers *. But the reaſons already adduced convince us that this aſſertion is unfounded; and the general reſemblance of theſe birds corroborates the evidence that their mode of ſubſiſting is the ſame.

It is no leſs difficult to breed the young of the Colibri than thoſe of the fly-bird; they are as delicate, and confinement proves equally fatal to them. The parents have been ſeen, hurried on by the audacity of affection, to ruſh with food for their progeny into the very hands of the plunderer. Labat relates an inſtance of this, which deſerves to be quoted. "I ſhowed," ſays he, "to Father Montdidier a neſt of Colibris, which was placed on a ſhed near the houſe. He carried it off with the young, when they were about fifteen or twenty days old, and put them in a cage at his room window, where

* Journal de Phyſique, *Janvier* 1778.

the

the cock and hen continued to feed them, and grew ſo tame, that they ſcarcely ever left the room; and though not ſhut in the cage, nor ſubjected to any reſtraint, they uſed to eat and ſleep with their brood. I have often ſeen all the four ſitting upon Father Montdidier's finger, ſinging, as if they had been perched upon a branch. He fed them with a very fine and almoſt limpid paſte, made with biſcuit, Spaniſh wine, and ſugar. They dipt their tongue in it, and when their appetite was ſatisfied they fluttered and chanted .... I never ſaw any thing more lovely than thoſe four pretty little birds, which flew about the houſe, and attended the call of their foſter-father *."

Marcgrave, who does not diſcriminate the Colibris from the fly-birds, mentions them as having only a feeble cry, and no travellers aſcribe ſong to them. Thevet and Lery alone aſſert of their *gonambouch* that it chants ſo as to rival the nightingale †; for it is from them that

* "He preſerved them in this way five or ſix months, and we hoped ſoon to ſee them breed, when Father Montdidier, having one night forgotten to tie the cage in which they rooſted by a cord that hung from the ceiling, to keep them from the rats, had the vexation in the morning to find that they were diſappeared; they had been devoured." Labat, *Nouveau Voyage aux Iles de l'Amerique*. Paris, 1722, t. IV. p. 14.

† "But, as a ſingular curioſity, and as a maſter-piece of littleneſs, we muſt not omit a bird which the ſavages call *gonambouch*, of a whitiſh and ſhining plumage, which, though not larger than a hornet, excels in ſong; inſomuch that this diminutive creature, ſcarce

that *Coreal* and ſome others have repeated the ſame. But it is moſt likely a miſtake; the gonambouch, or little bird of Levy, which has a *whitiſh ſhining plumage, and a clear diſtinct voice*, is the *ſugar bird*, or ſome other, and not the Colibri, whoſe notes form, according to Labat, only a ſort of pleaſant hum.

It does not appear that the Colibris advance ſo far into North America as the fly-birds; at leaſt, Cateſby ſays that he ſaw only one ſpecies of theſe in Carolina. And Charlevoix, who pretends that he found a fly-bird in Canada, confeſſes that he never ſaw there a Colibri *. Yet it is not the cold that prevents it from viſiting that province in the ſummer, ſince it ſeeks a cool temperature at a conſiderable height among the Andes. M. de la Condamine never ſaw Colibris more numerous than in the gardens of Quito †, where the climate is not hot. They prefer, therefore, a warmth of twenty or twenty-one degrees ‡: there, in a perpetual round of pleaſures and joys, they fly from the

ſcarce ſtirring from the great millet, which the Americans name *avati*, or other great plants, has its bill and throat always open. If one did not repeatedly ſee and hear, he would hardly be perſuaded that from ſo ſlender a body could proceed notes ſo clear, ſo liquid, and ſo loud, as not to yield to thoſe of the nightingale." *Voyage au Breſil, par Jean de Lery.* Paris, 1578, p. 175. The ſame fact is mentioned by Thevet. *Singularités de la France Antarctique.* Paris, 1558. p. 94.

* Hiſt. de Saint Domingue. *Paris*, 1730, *t.* I. *p.* 32.

† Voy. de la Condamine. *Paris*, 1745, *p.* 171.

‡ *i. e.* 77° or 79° of Farenheit.

expanded

expanded bloſſom to the opening bud, and where the harmonious year for ever invites them, by its enchanting mildneſs, to love and fruition.

The TOPAZ COLIBRI, *Buff.*

FIRST SPECIES.

Trochilus Pella, Linn. and Gmel.
Polytmus Surinamenſis Longicaudus Ruber, Briſſ.
Falcinellus gutture viridi, Klein.
The *Long-tailed Red Humming-bird*, Edw.
The *Topaz Humming-bird*, Lath.

As ſmallneſs was the moſt ſtriking character of the fly-birds, we began with the ſmalleſt: but that property, not being ſo conſpicuous in the Colibris, we ſhall reſume the natural order of magnitude. The Topaz appears, excluſive of the two long ſhafts that extend from its tail, to be the largeſt of the genus; we ſhould alſo call it the moſt beautiful, did not all theſe brilliant birds rival each other, and bewilder the imagination amid the blaze of their charms. Its form is delicate, ſlender, elegant, and rather ſmaller than the common creeper, its total length, from the point of the bill to the end of the true tail, being near ſix inches; the two long ſhafts project two inches and a half beyond it; the throat, and the fore ſide of the neck,

neck, decorated by the moſt brilliant topaz mark; that colour viewed obliquely changes into gold-green, and from below it appears pure green; a hood of ſoft black covers the head, a thread of the ſame black incloſes the topaz mark; the breaſt, the neck, the top of the back, are of a finer deep purple; the belly is of a ſtill richer purple, and dazzling with red and gold reflections; the ſhoulders and the lower part of the back, are orange rufous; the great quills of the wing, violet-brown; the little quills, rufous; the colour of the ſuperior and inferior coverts of the tail, gold-green; the lateral quills rufous, the two middle ones, purple brown; theſe project into two long ſhafts, which are webbed with a ſmall edging a line broad on each ſide; theſe long ſhafts, in their natural poſition, croſs each other a little beyond the tail, and then diverge; they drop in moulting, and the male to which they belong would then reſemble the female, were he not diſcriminated by other characters. The female has not the topaz breaſt, but only a ſlight trace of red; and in place of the fine purple and flame rufous of the male's plumage, almoſt all that of the female is gold-green: in both the feet are white.

[A] Specific character of the *Trochilus Pella*: "It is red, its middle tail-feathers very long, its head brown, its throat golden, and its rump green."

The GARNET.

Le Grenat, Buff.

SECOND SPECIES.

Trochilus Auratus var, Gmel.

THE cheeks as far as under the eye, the ſides and lower part of the neck and throat to the breaſt, are of a fine brilliant garnet; the upper ſide of the head and back, and the under ſide of the body, are of a ſoft black; the tail and wings of the ſame colour; but ornamented with gold-green. The bird is five inches long, and the bill ten or twelve lines.

The WHITE SHAFT.

Le Brin Blanc, Buff.

THIRD SPECIES.

Trochilus Superciliosus, Linn. and Gmel.
Polytmus Cayanenſis Longicaudus, Briſſ.
The *Supercilious Humming-bird*, Lath.

OF all the Colibris, this has the longeſt bill, which is twenty lines; the feathers of the tail, next the two long ſhafts, are alſo the longeſt, and the lateral ones continually decreaſe, to the two outermoſt, which are the ſhorteſt,

ſhorteſt, and this gives the tail a pyramidical ſhape; its quills have a gold gloſs on a grey and blackiſh ground, with a whitiſh edge at the point, and the two ſhafts are white through the whole projecting portions; all the upper ſide of the back and head, gold colour; the wing violet-brown; and the under ſide of the body white-gray [A].

THE

ZITZIL, or DOTTED COLIBRI.

Le Zitzil, ou Colibri Piqueté, Buff.

FOURTH SPECIES.

Trochilus Punctulatus, Gmel.
Polytmus Punctulatus, Briſſ.
Hoitzitziltototl, Fernandez.
The *Spotted Humming-bird*, Lath.

ZITZIL is contracted for *Hoitzitzil*, which is the Mexican name of this bird. It is pretty large; its wings blackiſh, marked with white points on the ſhoulders and back; the tail is brown, and white at the tip. This is all we can gather from an ill-written deſcription of Hernandez' editor *. He ſubjoins that he got his information from one Father Aloayſa; and

[A] Specific character of the *Trochilus Superciliosus*: "It is gloſſy brown; its middle tail-feathers very long; its belly ſomewhat fleſh-coloured; its eye-brows white."

* *Jo. Fab. Linceus.*

that the Peruvians call the ſame bird *pilleo*, and that living upon the juice of flowers, it prefers that of the thorny tribes *.

The BLUE SHAFT.

Le Brin Blue, Buff.

FIFTH SPECIES.

Trochilus Cyanurus, Gmel.
Polytmus Mexicanus Longicaudus, Briſſ.
Yayauquitototl, Seba and Klein.
The *Blue-tailed Humming-bird*, Lath.

ACCORDING to Seba, whom Klein and Briſſon have followed in reckoning this a ſpecies of Colibri, the two long projections of feathers which decorate its tail are of a fine blue; the ſame colour, only deeper, covers the ſtomach and fore part of the head; the upper ſide of the body and of the wings is light green; the belly cinereous. It is one of the largeſt Colibris, and almoſt equal to the epicurean warbler. Seba's figure repreſents it as a creeper, and that author ſeems to have never obſerved the three

* In another part of his work, Hernandez gives the names of ſeveral ſpecies of fly-birds and colibris, without characterizing any: theſe names are, *Quetzal Hoitzitzillin*, *Zochio Hoitzitzillin*, *Xiulks Hoitzitzillin*, *Tozcacoz Hoitzitzillin*, *Yotac Hoitzitzillin*, *Tenoc Hoitzitzillin*; whence it appears that *Hoitzitzillin* is the generic name.

ſhades

ſhades in the form of the bill which diſcriminate theſe three tribes, the fly-birds, the colibris, and the creepers. Nor is he more fortunate in diſplaying his eruditiqn; he applies to this Colibri the Mexican name *yayauhquitotatl*, which, in Fernandez, denotes a bird of the ſize of a ſtare. But ſuch errors are trifling in compariſon of thoſe into which naturaliſts are led by the collectors of curioſities, who value nothing but the glitter of their cabinets. To find an inſtance we need not ſtep aſide: Seba mentions Colibris from the Moluccas, from Macaſſar, and from Bali, not knowing that this tribe of birds is peculiar to the new world. Briſſon copies the miſtake, and deſcribes three ſpecies of *Colibris from the Eaſt Indies*. Theſe are undoubtedly creepers, the brilliancy of whoſe colours, and the names *tſioei* and *kakopit*, which Seba tranſlates *little kings of flowers*, have ſuggeſted the Colibri. No traveller acquainted with natural hiſtory has found Colibris in the old continent; and what Francis Cauche ſays of the ſubject, is too obſcure to merit attention *.

* In his account of Madagaſcar, *Paris*, 1651, *p.* 137, borrowing the name and the habits of the Colibri, he aſcribes them to a little bird of this iſland. It is probably by a ſimilar abuſe of names, that *fly-bird* occurs in the voyages of the Company, applied to a bird of the Coromandel coaſt, which is indeed very ſmall, and is elſewhere called *tati*. *Recueil de Voyages qui ont ſervi à l'etabliſſement de la Compagnie des Indes*. Amſterdam, 1702, t. VI. p. 513.

[A] Specific character of the *Trochilus Cyanurus*: "It is green, below cinereous; its front, its throat, and the two middle feathers of the tail longer than the reſt, and blue."

The GREEN and BLACK COLIBRI.

SIXTH SPECIES.

Trochilus Holoſericeus, Linn. Gmel. and Borowſk.
Polytmus Mexicanus, Briſſ.
Avis Auricoma Mexicana, Klein.
The *Black-bellied Humming-bird*, Edw. Baner. and Lath.

IT is rather more than four inches long; its bill thirteen lines; its head, neck, and back, are gold colour and bronze; the breaſt, the belly, the ſides of the body, and the legs, are ſhining black, with a light reddiſh reflection; a little white bar croſſes the lower belly, and another of gold-green, gliſtening with lively blue, interſects tranſverſely the top of the breaſt; the tail is velvet black, with the blue gloſs of poliſhed ſteel. It is ſaid that the female may be diſtinguiſhed in this ſpecies by the want of the white ſpot on the lower belly. The bird is found both in Mexico and in Guiana. Briſſon refers to this ſpecies the *Avis auricoma Mexicana* of Seba, which is indeed a Colibri; but his deſcription is ſo vague and indefinite, as to apply equally to them all.

[A] Specific character of the *Trochilus Holoſericus*: "It is green; the quills of its tail equal, and black above; a blue bar on the breaſt; its belly black."

The TUFTED COLIBRI, *Buff.*

SEVENTH SPECIES.

Trochilus Paradiſeus, Linn. Gmel. and Borowſk.
Polytmus Mexicanus Longicaudus ruber criſtatus, Briſſ.
The *Paradiſe Humming-bird*, Lath.

BRISSON finds this alſo in Seba's catalogue. I am generally averſe to form ſpecies on the indications, ſo often defective, of that compiler; but the characters of the preſent ſeem ſufficiently diſtinct to be adopted. "This little bird," ſays Seba, "has a fine red plumage, blue wings; two long feathers project from the tail; and on its head there is a tuft which is very long in proportion to its thickneſs, and falls back on the neck; the bill is long and curved, including a ſmall *bifid* tongue, which ſerves to ſuck the flowers."

Briſſon meaſuring Seba's figure, which is not of much account, found near five inches ſix lines to the end of the tail.

[A] Specific character of the *Trochilus Paradiſeus*: "It is red, its wings blue, its head creſted; its middle tail-feathers very long."

THE VIOLET-TAILED COLIBRI, *Buff.*

EIGHTH SPECIES.

Trochilus Albus, Gmel.
Trochilus Nitidus, Lath. Ind.
The *Violet-tailed Humming bird*, Lath. Syn.

THE bright pure violet which paints the tail of this Colibri, diſcriminates it from the reſt; the four middle feathers of the tail are of a violet colour, melted under brilliant reflections of gold-green; the ſix outer ones, viewed from below, preſent a white point, with a violet ſpot that ſurrounds a ſpace of dark blue like burniſhed ſteel; all the under-ſide of the body is richly gilded in the front view, and when held obliquely it appears green; the wing, as in all theſe birds, is brown, verging on violet; the ſides of the throat are white, and, in the middle, there is a longitudinal ſtreak of brown, mixed with green; the ſides are coloured with the ſame; the breaſt and belly are white. This ſpecies is pretty large, it being five inches; and has one of the longeſt bills, which is ſixteen lines.

[A] Specific character of the *Trochilus Albus*: "It is gold-green; its under ſurface, the ſides of the neck, and the tips of the ſix outer tail feathers, white; its tail violet."

THE GREEN-THROATED COLIBRI, *Buff.*

NINTH SPECIES.

Trochilus Maculatus, Gmel.
Trochilus Gularis, Lath. Ind.
The *Green-throated Humming-bird*, Lath. Syn.

A STREAK of very bright emerald-green is traced on the throat of this Colibri, which falls, ſpreading on the fore-ſide of the neck; there is a black ſpot on the breaſt; the ſides of the throat and neck are rufous, mixed with white; the belly is pure white; the upper ſide of the body, and of the tail, dull gold-green; below the tail, are the ſame violet, white and burniſhed ſteel ſpots, as in the *Violet-tailed Colibri.* Theſe two ſpecies appear analogous, and they are of the ſame ſize, but the bill of the Green-throated Colibri is not ſo long. We ſaw in Mauduit's cabinet a Colibri of the ſame dimenſions, with the upper ſide of the body faintly tinged with green and gold on a blackiſh grey ground, and all the fore-part of the body rufous, which ſeems to us the female.

THE

CARMINE-THROATED COLIBRI, *Buff.*

TENTH SPECIES.

Trochilus Jugularis, Linn. and Gmel.
The *Red-breaſted Humming-bird*, Edw. and Lath.

IT is four inches and a half in length; its bill thirteen lines, much curved, and therefore analogous to that of the creepers, as Edwards remarks; the throat, the cheeks, and all the fore-part of the neck, carmine red, with a ruby-luſtre; the upper ſide of the head, body, and tail, of a ſoft blackiſh brown, with a ſlight fringe of blue on the edge of the feathers; a deep gold-green ſhines on the wings; the inferior and ſuperior coverts of the tail are of a fine blue. This bird was brought from Surinam into England.

[A] Specific character of the *Trochilus Jugularis*: "It is bluiſh, its tail feathers equal, its neck below blood-coloured."

The VIOLET COLIBRI, *Buff.*

ELEVENTH SPECIES.

Trochilus Violaceus, Gmel.
Polytmus Cayanenſis Violaceus, Briſſ.
The *Violet Humming-bird*, Lath.

IT is four inches and two lines in length; its bill eleven lines; the whole head, neck, and belly, covered with purple violet, which is brilliant on the throat and on the fore-ſide of the neck, and diluted on all the reſt of the body with a mixture of velvet black; the wing is gold green; the tail the ſame, with a changing reflection of black. It is found in Cayenne; its colours reſemble thoſe of the *garnet* Colibri; but the difference of ſize is too great to admit of their being claſſed together.

[A] Specific character of the *Trochilus Violaceus*: "It is violet; its wings and tail gold-green."

The GREEN GORGET.

Le Hauſſe-Col Vert, Buff.

TWELFTH SPECIES.

Trochilus Gramineus, Gmel.
The *Black-breaſted Humming-bird*, Lath.

IT is rather larger than the Violet-tailed Colibri, but its bill is not ſo long; all the forepart and ſides of the neck, with the lower part of the throat, emerald green; the top of the throat, or the ſmall portion beneath the bill, of a bronze colour; the breaſt velvet black, tinged with dull blue; green and gold appear on the flanks, and cover all the upper ſide of the body; the belly white; the tail purple blue, with the reflection of burniſhed ſteel, and exceeds not the wing. We conceive the female to be another Colibri of the ſame ſize and diſtribution of colours, except that the green, on the forepart of the neck, is interſected by two white ſtreaks, and that the black, on the throat, is neither ſo broad nor ſo deep. Theſe two birds are in the admirable ſeries of Colibris and Flybirds in Dr. Mauduit's cabinet.

[A] Specific character of the *Trochilus Gramineus*: "It is gold-green, below white; its throat emerald; its breaſt black; its tail purple."

The RED COLLAR, *Buff.*

THIRTEENTH SPECIES.

Trochilus Leucurus, Linn. and Gmel.
Polytmus Surinamenſis, Briſſ.
The *White-tailed Humming bird*, Lath.

THIS is of the middle ſize, being four inches and five or ſix lines in length; on the lower and fore-part of the neck, there is a handſome red half collar, of conſiderable breadth; the back, the neck, the head, the throat, and the breaſt, are of a bronze and gold green; the two middle feathers of the tail are of the ſame colour; the eight others are white, and this is the character by which Edwards diſcriminates the bird.

[A] Specific character of the *Trochilus Leucurus*: "It is gold-green, its tail feathers equal, its collar red."

The BLACK PLASTRON.

FOURTEENTH SPECIES.

Trochilus Mango, Linn. and Gmel.
Guainumbi minor, roſtro nigro, Ray and Will.
Polytmus Jamaicenſis, Briſſ.
The *Mango Humming-bird*, Lath.

THE throat, the fore-ſide of the neck, the breaſt, and the belly of this Colibri, are of the moſt beautiful velvet black; a ſtreak of brilliant blue riſes from the corners of the bill, and, deſcending over the ſides of the neck, ſeparates the black plaſtron, or breaſt-piece, from the rich gold-green, with which all the under ſurface of the body is covered; the tail is of a purple brown, gloſſed with ſhining violet, and each quill is edged with the blue of burniſhed ſteel. Theſe colours reſemble thoſe of Marcgrave's fifth ſpecies, only the bird is rather ſmaller; it is four inches long; the bill one inch; the tail eighteen lines. It is found equally in Brazil, in St. Domingo, and in Jamaica.

[A] Specific character of the *Trochilus Mango*: "It is gloſſy green; its tail-feathers ſomewhat equal and ferruginous; its belly black."

The WHITE PLASTRON.

FIFTEENTH SPECIES.

Trochilus Margaritaceus, Gmel.
The *Grey-necked Humming-bird*, Lath.

ALL the under ſide of the body, from the throat to the lower belly, is white pearl gray; the upper ſide of the body is gold-green; the tail is white at the tip, then croſſed by a bar of black burniſhed ſteel, and after that by one of purple brown; and it is black with a blue ſteel caſt at its origin. It is four inches long, and its bill an inch.

The BLUE COLIBRI, *Buff.*

SIXTEENTH SPECIES.

Trochilus Venuſtiſſimus, Gmel.
Trochilus Cyaneus, Lath. Ind.
Polytmus Mexicanus Cyaneus, Briſſ.
The *Crimſon-headed Blue Humming-bird*, Lath. Syn.

IT is ſtrange that Briſſon, who never ſaw this bird, ſhould follow the vague, inaccurate account of Seba, inſtead of the deſcription of Dutertre. The wings and tail are not blue, as Briſſon repreſents, but black, as Father Dutertre mentions, and indeed according to the ana-

logy

logy of all the birds of this tribe. The whole of the back is azure; the head, the throat, and the fore-part of the body, as far as the middle of the belly, are velvet crimſon, which, if held in different poſitions, is enriched with a thouſand beautiful reflections. Dutertre only adds, that it is about *half the ſize of the little crowned wren.* The figure of Seba, which Briſſon ſeems to take, repreſents a creeper [A].

The PEARL GREEN.

SEVENTEENTH SPECIES.

Trochilus Dominicus, Linn. and Gmel.
Polytmus Dominicenſis, Briſſ.
The *St. Domingo Humming-bird*, Lath.

THIS is one of the ſmalleſt of the tribe, and hardly exceeds the creſted fly-bird; all the upper ſide of the head, body, and tail, are of a faint gold-green, which is intermixed, on the ſides of the neck, and more and more on the throat, with pearl white-gray; the wing is brown, as in the reſt, and tinged with violet; the tail is white at the end, and of the colour of poliſhed ſteel below [B].

[A] Specific character of the *Trochilus Venuſtiſſimus:* "It is red; its back blue; its wings black."

[B] Specific character of the *Trochilus Dominicus:* "It is ſhining green, below ſomewhat cinereous; its tail-feathers ferruginous in the middle, and white at the tips."

ROYAL ASIATIC SOCIETY BOMBAY 61

The RUSTY BELLIED COLIBRI.

EIGHTEENTH SPECIES.

Trochilus Hirſutus, Gmel.
Polytmus Braſilienſis, Briſſ.
Guainumbi minor, roſtro incurvo, Ray and Will.
The *Ruſous-bellied Humming-bird*, Lath.

THIS is the fourth ſpecies of Marcgrave, and muſt be very ſmall, ſince he ſays that it is inferior to the third, which he had formerly ſtated as the leaſt. All the upper ſide of the body is gold-green; all the under ſide ruſty blue; the tail is black, with green reflections, and the point is white; the lower mandible is yellow at its origin, and black to the extremity; the feet are yellowiſh white.

The LITTLE COLIBRI, *Buff.*

NINETEENTH SPECIES.

Trochilus-Thaumantias, Linn. and Gmel.
Guainumbi minor toto corpore aureo, Ray and Will.
Polytmus, Briſſon.
Melliſuga Ronckje dicta, Klein.
Avicula Americana Colubritis, Seba.
The *Admirable Humming-bird*, Lath.

THIS is the laſt and ſmalleſt of all the Colibris; it is only two inches and ſix lines

lines in length; its bill eleven lines, and its tail twelve or thirteen; it is entirely gold-green, except the wing, which is violet or brown: there is a ſmall white ſpot on the lower belly, and a ſmall border of the ſame colour on the feathers of the tail, broader on the two outer ones, which it half covers. Marcgrave again ſtops to admire the brilliant plumage with which nature has decked theſe charming birds. The little Colibri in particular, he obſerves, dazzles like the ſun*.

* *In ſummâ ſplendet ut ſol.*

[A] Specific character of the *Trochilus Thaumantias:* "It is ſhining green; its tail-feathers equal and fringed with white, the outermoſt white exteriorly."

The PARROT*.

Le Parroquet, Buff.

THE animals which man has the moſt admired, are thoſe that ſeem to participate of his nature. He is ſtruck with wonder as often as he traces his external form in the ape, or hears his voice imitated by the Parrot; and, in firſt moments of his ſurpriſe, he is diſpoſed to rank them above the reſt of the brutes. Theſe animals have fixed even the ſtupid attention of ſavages, who behold the magnificent ſcene of nature and her exquiſite productions with the moſt perfect inſenſibility: they ſtop the progreſs of their canoes, and linger gazing whole hours at the capers of the marmoſet. Parrots are the only birds which they are fond of raiſing and educating, and which they are even at pains to improve; for they have diſcovered the art, which is ſtill unknown to us, of vary-

* In Greek Ψιτλακη; in modern Greek Παπαγας; in Latin *Pſittacus*. In German the Parrot is called *Pappengey*, the Parakeet *Sittick*, or *Sickuſt*: in Spaniſh the Parrot is named *Popagio*; in Italian *Papagallo*, and the Parakeet *Peroquetto*: in Poliſh *Papuga*: in Turkiſh *Dudi*: In Mexican *Tuznene*: in Brazilian *Ajuru*, and the Parakeet *Tui*. In old French *Papegaut*. According to Aldrovandus, moſt of theſe names are derived from *Papa*, and denote *the pope of the birds*.

ing

ing and heightening the colours that deck the plumage *.

The power of uſing the hand, and of walking on two feet, the reſemblance, how faint ſoever, to the face, the want of a tail, the naked hams; the ſimilarity of the ſexual parts, the poſition of the breaſts, and the menſtrual flux in the females; the ardent paſſion of the males for women: all theſe circumſtances have procured to the ape the name of *wild man* from thoſe who themſelves are indeed only half-men, and who can compare only the exterior characters. Had what was equally poſſible taken place, had the voice of the Parrot been beſtowed on the ape; the human race would have been ſtruck dumb with aſtoniſhment, and the philoſopher could hardly have been able to demonſtrate that the ape was ſtill a brute. It is fortunate, therefore, that nature has ſeparated the faculties of imitating our ſpeech and our geſtures, and ſhared them between two very different ſpecies; and while ſhe has conferred on all animals the ſame ſenſes, and on ſome the ſame members and organs, with man, ſhe has reſerved for him alone the power of improving

* Thoſe Parrots to which the ſavages give artificial colours are termed *tapirés*. This is effected, it is ſaid, by means of the blood of a frog, which they drop into the ſmall wounds made in young Parrots by plucking their feathers: thoſe which ſprout again change their green or yellow tints into orange, roſe colour, or variegated hues, according to the medicaments employed.

them;

them; that noble mark of our pre-eminence, which conſtitutes our empire over the animated world.

There are two kinds of improvement; the one barren, and confined to the individual; the other prolific, and extending through the ſpecies, and cultivated in proportion as it is encouraged by the inſtitutions of the ſociety. Among brutes, the experience of one race is never tranſmitted to the ſucceeding; their acquiſitions are merely individual; they are the ſame now that they ever were—ever will be. But man is progreſſive; he receives the inſtructions of paſt ages, he reaps the benefit of the diſcoveries of others, and, by a proper uſe of his time, he may continually advance in knowledge. And who can, without regret and indignation, view that long gloomy night of ignorance and barbariſm, which overſpread Europe, and which not only arreſted our improvement, but thruſt us back from that elevation which we had attained? But for theſe unfortunate viciſſitudes, the human ſpecies would invariably approach towards the point of perfection.

The mere ſavage, who ſhuns all ſociety, and receives only an individual education, cannot improve his ſpecies, and will not differ, even in underſtanding, from thoſe animals on which he has beſtowed his name. Nor will he acquire even ſpeech, if the family be diſperſed, and the

children abandoned ſoon after birth. The firſt rudiments of the ſocial diſpoſition are therefore unfolded by the tender attachment and the watchful ſolicitude of the mother; the helpleſs ſtate of the infant requires conſtant and aſſiduous attention; its claimant cries are anſwered by ſoothing expreſſions, which begins the formation of language, and, during the ſpace of two or three years, this grows in ſome degree fixed and regular. But, in other animals, the growth is much more rapid; the parental endearments laſt only ſix weeks or two months; and the impreſſions are ſlight and tranſitory; and, after ſeparation, they entirely ceaſe. It is not, therefore, to the peculiar ſtructure of our organs that we are indebted for the attainment of ſpeech; the Parrots can articulate the ſame ſounds, but their language is mere prattle, and void of ſignification.

The power of imitating our diſcourſe or our actions, confers no real ſuperiority on an animal. It never incites to the cultivation of talents; it never tends to the improvement of the ſpecies. The articulation of the Parrot implies only the cloſe analogy of its organs of hearing and of voice to thoſe in man; and that ſimilarity of ſtructure obtains, though in a leſs degree, in many other birds, whoſe tongue is thick, round, and nearly of the ſame form. The ſtares, the blackbirds, the jays, the jack-daws, &c. can imitate words. Thoſe whoſe tongue is forked

(and

(and almoſt all the ſmall birds may be ranged in that claſs), whiſtle more eaſily than they prattle; and if, with this ſtructure, they have alſo ſenſibility of ear, and can accurately retain the impreſſions made on that organ, they will learn to repeat airs: the canary, the linnet, the ſiſkin, and the bulfinch, ſeem natural muſicians. The Parrot imitates every ſort of noiſe, the mewing of cats, the barking of dogs, and the notes of other birds, as well as the human voice; yet it can only ſcream or pronounce very ſhort phraſes; and, though capable of even articulating ſounds, it is unable to modulate theſe, or ſupport them by intermingling gentle cadences. It has therefore leſs acuteneſs of perception, leſs memory, and leſs flexibility of organs.

There are alſo two different kinds of imitation; the one is acquired from reflection; the other is innate and mechanical: the latter proceeds from the common inſtinct diffuſed through a whole ſpecies, which prompts or conſtrains each individual to perform ſimilar actions; and the more ſtupid the animal, the more entire will be this influence, and the cloſer will be the reſemblance. A ſheep has invariably the ſame habits with every other ſheep; the firſt cell of a bee is preciſely like the laſt. The knowledge of the individual is equal to that of the ſpecies;—ſuch is the diſtinction between reaſon and inſtinct. The other kind of imita-

tion, which ſhould be regarded as artificial, is the acquiſition of the individual, and cannot be communicated. The moſt accompliſhed Parrot will never tranſmit his talent of prattling to his offspring. When an animal is inſtructed by man, the improvement reſts with it alone. This imitation depends as well as the former on the peculiar ſtructure; but it alſo implies ſenſibility, attention, and memory; and thoſe ſpecies which are ſuſceptible of education, rank high in the order of organized beings. If the animal be eaſily trained, and each individual receive a certain degree of inſtruction, as in the caſe of the dogs, the whole ſpecies will acquire ſuperiority under the direction of man; but when abandoned to nature, the dog will relapſe into the wolf or the fox, and would never of itſelf emerge from that ſtate.

All animals may therefore be improved by aſſociating with man; but they cannot be inſtructed to improve each other; for they never can communicate the ideas and knowledge which they have acquired. Even birds whoſe ſhape and proportions are ſo different from thoſe of quadrupeds, are ſuſceptible of the ſame degrees of education. The *agamis* can be trained to perform nearly all the actions of the dogs; a canary, properly bred, ſhews its attachment by careſſes that are equally animated, and more innocent and more ſincere than thoſe of the cat. There are many inſtances

ſtances of the wonderful effects of education on the rapacious birds *, which ſeem the moſt ſavage and the moſt averſe to bend to inſtruction. In

* "In 1763," ſays M. Fontaine, "a buzzard was brought to me that had been taken in a ſnare: it was at firſt extremely ſavage and even cruel. I undertook to tame it, and I ſucceeded by leaving it to faſt, and conſtraining it to come and eat out of my hand. By purſuing this plan, I brought it to be very familiar; and after having ſhut it up about ſix weeks, I began to allow it a little liberty, taking the precaution, however, to tie both pinions of its wings. In this condition it walked out into my garden, and returned when I called it to feed. After ſome time, when I judged that I could truſt to its fidelity, I removed the ligatures, and faſtened a ſmall bell, an inch and a half in diameter, above its talon, and alſo attached on the breaſt a bit of copper having my name engraved. I then gave it entire liberty, which it ſoon abuſed; for it took wing, and flew as far as the foreſt of Beleſme. I gave it up for loſt; but four hours after I ſaw it ruſh into my hall, which was open, purſued by five other buzzards, which had conſtrained it to ſeek its aſylum .... After this adventure it ever preſerved its fidelity to me, coming every night to ſleep on my window; it grew ſo familiar with me, as to ſeem to take ſingular pleaſure in my company. It attended conſtantly at dinner, ſat on a corner of the table, and very often careſſed me with its head and bill, emitting a weak ſharp cry, which however it ſometimes ſoftened. It is true that I alone had this privilege. It one day followed me, when I was on horſeback, more than two leagues, ſailing above my head .... It had an averſion both to dogs and cats, nor was it in the leaſt afraid of them; it had often tough battles with them, and always came off victorious. I had four very ſtrong cats, which I collected into my garden beſide my buzzard; I threw to them a bit of raw fleſh, the nimbleſt cat ſeized it, the reſt purſued; but the bird darted upon her body, bit her ears with his bill, and ſqueezed her ſides with his talons, with ſuch force that the cat was obliged to relinquiſh her prize. Often another cat ſnatched it the inſtant it dropt, but ſhe ſuffered the ſame treatment, till the buzzard got entire poſſeſſion of the plunder. He was ſo dexterous in his defence, that when he perceived himſelf aſ-

In Aſia, the pigeon is taught to carry letters between places an hundred leagues diſtant: and the art of falconry proves that, by directing the inſtinct of birds, they may be as much improved as the other animals. On the whole, it appears that if man beſtowed equal time and attention upon any animal as upon a child, it would acquire a mechanical imitation of the ſame actions; the effects only would differ. In the

ſailed at once by the four cats, he took wing, and uttered a cry of exultation. At laſt, the cats, chagrined at their repeated diſappointment, would no longer contend.

"This buzzard had a ſingular antipathy; he would not ſuffer a red cap on the head of any peaſant, and ſo alert he was in whipping it off, that they found their head bare without knowing what was become of their cap. He alſo ſnatched wigs without doing any injury, and he carried theſe caps and wigs to the talleſt tree in a neighbouring park, which was the ordinary depoſit of his booty .... He would ſuffer no other bird of prey to enter his domain; he attacked them very boldly, and put them to flight. He did no miſchief in my court-yard, and the poultry, which at firſt dreaded him, grew inſenſibly reconciled to him. The chickens and ducklings received not the leaſt harſh uſage, and yet he bathed among the latter. But what is ſingular, he was not gentle to my neighbours' poultry; and I was often obliged to publiſh that I would pay for the damages which he might occaſion. However, he was often fired at, and he received fifteen muſket-ſhots, without ſuffering any fracture. But once early in the morning, hovering over the ſkirts of a foreſt, he dared to attack a fox; and the keeper ſeeing him on the ſhoulders of the fox, fired two ſhots at him; the fox was killed and the buzzard had his wing broken; yet notwithſtanding this fracture he eſcaped from the keeper, and was loſt ſeven days. This man having diſcovered, from the noiſe of the bell, that he was my bird, came next morning to inform me; I ſent to make a ſearch near the ſpot; but the bird could not be found, nor did it return till ſeven days after. I had been uſed to

call

the one caſe, reaſon extends and diffuſes the attainments; in the other, they continue ſtationary, and periſh with the poſſeſſor.

But that education which ſeems to unfold the faculties, and meliorate the diſpoſitions of quadrupeds or birds, renders them odious to the reſt of their ſpecies. When a buzzard, for inſtance, a magpie, or a jay, eſcapes to the woods, its ſavage kindred flock around it to gaze at the novelty. Their wonder is ſoon converted into rage; and they furiouſly attack and drive off the intruder: nor is it admitted into their ſociety till it relinquiſhes its artificial habits, and adopts the manners of the tribe.

Birds are deſtined by nature to enjoy the completeſt independence, and exult in the moſt unbounded freedom. Other animals are condemned to crawl on the ſurface; theſe ſoar aloft

call him every evening with a whiſtle, which he anſwered not for ſix days; but, on the ſeventh, I heard a feeble cry at a diſtance, which I judged to be that of my buzzard: I repeated the whiſtle a ſecond time, and I heard the ſame cry. I went to the part whence the ſound came, and, at laſt, found my poor buzzard with his wing broken, which had travelled more than half a league on foot to regain his aſylum, from which he was then diſtant about 120 paces. Though he was extremely reduced, he gave me many careſſes. It took near ſix weeks till he was recruited, and his wounds healed; after which he began to fly as before, and follow his old habits for about a year: he then diſappeared for ever. I am convinced that he was killed by accident; and that he would not have forſaken me from choice."

Letter of M. Fontaine, Curé de Saint-Pierre de Beleſme, to M. le Comte de Buffon, bearing date 28 January, 1778.

in the air. No obſtacle can oppoſe their progreſs; no ſpot can fix their reſidence: the ſky is their country, and their courſe is on the wings of the breeze. They foreſee the viciſſitude of the ſeaſons, and watch their return. They generally appear when the mild influence of ſpring has clothed the foreſts with verdure; there they neſtle, concealed under the foliage. Heaven and earth ſeem to conſpire to their felicity. But ſolicitude ſoon ariſes: they dread the cruel viſits of the ſame animals on which they before looked down with contempt. The wild cat, the marten, the weazel, ſeek to devour the objects of their tendereſt affection: the adder clambers to gain their eggs, or devour their progeny: and children, that amiable portion of human kind, but who, from want of employment, are ever in miſchief, wantonly plunder the ſacred depoſits of love. Often the mother ruſhes into danger in defence of her young; and ſacrifices to the ardor of her attachment, her love, her liberty, and her life.

Why is the ſeaſon of the higheſt pleaſures alſo the ſeaſon of the greateſt ſolicitude? Why are the moſt delicious enjoyments always damped, even in the freeſt and moſt innocent of beings, by the cruelleſt anxieties? May we not complain of harſhneſs in nature, the common mother of all? Her benevolence is never pure, or of long continuance. No ſooner the happy pair united, by choice and by their mutual

tual labours, have fabricated the manſion of love, than they dread the plunderer's attack. The feathered race has alſo its tyrants; and the rapacious birds are the more formidable, as they are more independent. The eagle ſnatches with impunity the prey from the lion; all dread his aſpect; the feebler birds ſcream at his approach, and ſeek immediate ſhelter. Perhaps the eagle would have occupied a large portion of the earth, if man had not driven him to the ſummits of mountains and inacceſſible tracks, where in ſolitude he ſtretches out his gloomy dominion.

From this curſory view, it would appear that birds rank next to man in the great ſcale of exiſtence. Nature has accumulated and concentrated more ſtrength in their little bodies than ſhe has communicated to the huge limbs of the moſt powerful quadrupeds; agility is combined with ſolidity; their empire extends over the inhabitants of the air, the earth, and the waters. The whole of the inſect tribes are excluſively ſubject to their dominion, and ſeem only deſtined to feed theſe deſtroyers: they alſo ſeize the noxious reptiles on the ground, and ſnatch the fiſh from their element. They even attack the quadrupeds; the buzzard ſometimes darts on the fox, and the falcon ſtops the antelope; the eagle preys on the ſheep, murders the dog equally with the hare, and tranſports their carcaſes to his eyry. The birds walk on two feet,

feet, imitate ſpeech, and repeat muſical airs; in theſe reſpects too they reſemble man, while their power of flying marks a decided ſuperiority above all the other terreſtrial animals.

But from this general view of the nature of birds, let us deſcend to ſurvey the genus of the Parrots. That tribe, the moſt numerous of all, affords ſtriking illuſtrations of a new propoſition: that, in birds, as in quadrupeds, thoſe which inhabit the tropical regions are confined excluſively to their reſpective continents. This principle ſerves to fix their nomenclature; the ſpecies are much diverſified and multiplied; above 100 are known, and yet of theſe not one is common to both continents. What can be a more deciſive proof of this general propoſition which we explained in the Hiſtory of Quadrupeds? The two continents were never joined, except towards the north, and therefore no animal incapable of ſupporting the intenſe cold of the frozen regions could migrate from the one into the other. Birds alſo, ſuch as the Parrots, which live and propagate only in warm climates, have remained indigenous; ſome inhabit the tropical regions of the new continent, others thoſe of the old, and occupy in each a zone extending twenty-five degrees on both ſides of the equator.

But it will be ſaid that if the elephants and other large quadrupeds, which at preſent are peculiar to Africa and India, inhabited originally

nally the northern tracts in both continents, might not this have alſo been the caſe in regard to the Parrots? And as the earth gradually cooled, theſe might continually advance towards the tropics; and neither the lofty mountains, nor the narrow paſs of the iſthmus of Panama, could prevent their migration.

This objection, though plauſible, is only a new queſtion, which, in whatever way it be reſolved, cannot affect our hypotheſis, that the north was the primæval reſidence of animals, and that they afterwards removed to the regions of the ſouth. But thoſe birds whoſe conſtitution is adapted to a hot climate could never riſe to the frozen ſummits of mountains; and the cold that prevails in the elevated regions of the air would as effectually ſtop their flight, as the various obſtacles to be ſurmounted would limit the progreſs of the elephant. Thus what appears at firſt an objection, is really a confirmation of the theory; ſince not only the quadrupeds, but alſo the birds, which are natives of the torrid tracts in the old world, have never penetrated or ſettled in the inſulated continent of South America. In the caſe of the birds, however, this principle has ſome exceptions; for a few ſpecies are found equally in the equatorial parts of both continents. But this is owing to particular circumſtances; their vigorous wings and their power of reſting on the ſurface of the water by means of the broad membranes

branes of their feet. The Parrots can neither ſoar to a vaſt height, nor fly to a great diſtance, and their feet are not webbed. Accordingly, none of theſe have ever migrated from the one continent to the other, unleſs tranſported by men acroſs the intervening ocean *. This will be better perceived after viewing the arrangement, and comparing the deſcriptions of the ſeveral ſpecies. It was perhaps as difficult to claſs them as the monkeys; ſince all the preceding naturaliſts have confounded them together.

The Greeks were acquainted at firſt with only one ſpecies of Parrot, or rather of Parrakeet; it is what we now call the *Great Ring Parrakeet*, and comes from India. They were brought from the iſland of Taprobane into Greece by Oneſicrites, who commanded Alexander's fleet. They were ſo new and uncommon that Ariſtotle himſelf appears not to have ſeen them, and mentions them only from report †. But the beauty of theſe birds, and their power of imitating ſpeech, ſoon made

* The Parrots have a laborious ſhort flight, ſo that they cannot croſs an arm of the ſea ſeven or eight leagues broad. Each iſland of South America has its particular Parrots; thoſe of St. Lucia, of St. Vincent, of Dominica, of Martinico, are different from each other: thoſe of the Caribbee iſlands do not reſemble them, nor are theſe Caribbee Parrots found near the Oronooco, which is the part of the continent neareſt theſe iſlands. *Note communicated by M. de la Borde, King's Phyſician at Cayenne.*

† *Hiſt. Anim.* Lib. VIII. 12. "There is an Indian bird called *pſittace*, which is ſaid to ſpeak."

them the objects of luxury among the Romans, and the prevalence of that practice provoked the indignation of the rigid Cato *. They were lodged in cages of silver, of shells, and of ivory; and the price of a Parrot often exceeded that of a slave †.

No Parrots were known at Rome, but those brought from India ‡, until the time of Nero; the emissaries of that prince found them in the island of the Nile, between Syene and Meroe, which is exactly in the limit that we assigned of twenty-four or twenty-five degrees latitude §. Pliny tells us that the Latin name *psittacus* was derived from the Indian appellation *psittace*, or *sittace* ||.

The Portuguese, who first doubled the Cape of Good Hope, and explored the shores of Africa, found the country of Guinea, the islands scattered in the Indian ocean, and also the continent, inhabited by various kinds of Parrots, all unknown in Europe. So numerous they were

* This austere censor exclaimed in the midst of the assembled senate, "O! senators! O! unhappy Rome! what forebodings! in what times do we live, to see the women feed dogs on their knees, and the men carry Parrots in their hands!" *Columella, Dict. Antiq.* Lib. III.

† Statius.

‡ Pliny, *Lib. X.* 42.—Pausanias.

§ *Id.* Lib. VI. 29.

|| Lib. X. 42. They were brought also in the fifteenth century from the countries through which Alexander marched. *Relation de Cadamosto.* See *Hist. Gen. des Voyages*, t. II. 305.

at

at Calicut *, in Bengal, and on the African coaſts, that the Indians and negroes were obliged during harveſt to watch their fields of rice and maize, and to repel the deſtructive havock of theſe birds †.

This vaſt multitude of Parrots in all countries which they inhabit ‡, ſeems to prove that they breed ſeveral times annually, ſince the product of one hatch is inconſiderable. Nothing could equal the variety of the ſpecies which navigators found on every part of the coaſt of South America. Many iſlands were called the *Parrot Iſlands*. They were the only animals that Columbus met with in the one where he firſt landed §. They were the early articles of traffic between the Europeans and Americans ||. The American and African Parrots were imported in ſuch numbers, that the Parrot of the ancients was forgotten; it was known only by deſcription in the time of Belon ⸸.

* Recueil des Voyages qui ont ſervi à l'etabliſſement de la Compagnie des Indes, &c. *Amſterdam*, 1702, *t. III. p.* 195.

† *See* Mandeſlo, at the end of Olearius, *t. II. p.* 144.

‡ "Among the many remarkable animals, the Parrots of Malabar excite the admiration of navigators, by their prodigious numbers, and by the variety of their ſpecies. Dellon avers that often he had the pleaſure of ſeeing two hundred taken in one draw of a net." *Hiſt. Gen. des Voy. t. XI. p.* 454.

§ Guanahani, one of the Lucayos.

|| Firſt Voyage of Columbus in the beginning of the *Hiſt. Gen. des Voy. t. XII.*

⸸ *Nat. des Oiſeaux*, p. 296.

We

We ſhall range the Parrots in two great claſſes; the firſt comprehending thoſe of the old continent, the ſecond thoſe of the new. The firſt will be ſubdivided into five families; the Cockatoos, the Parrots properly ſo called, the Lories, the long-tailed Parrakeets, and the ſhort-tailed Parrakeets. Thoſe of the new world will include ſix other families; the Maccaws, the Amazonians, the Creeks, the Popinjays, the long-tailed Paroquets, and the ſhort-tailed Paroquets.

PARROTS
OF THE OLD CONTINENT.

The COCKATOOS.

Les Kakatoes, Buff.

THE largeſt Parrots of the old continent are the Cockatoes. They are all natives of the ſouth of Aſia, where they ſeem indigenous. We are uncertain whether they are alſo found in Africa, but they are undoubtedly not found in America. They are ſpread through the ſouthern parts of India *, and in all the iſlands of the Indian ocean, at Ternate †, at Banda ‡, at Ceram §, in the Philippine iſlands ||, and in

* "The trees of this city (Amadabat, capital of Guzarat), and thoſe on the road from Agra to Brampour, which is 150 German leagues, breed an inconceivable number of Parrots . . . Some are white, or pearl grey, and capped with a carnation tuft; theſe are called *kakatous*, becauſe they diſtinctly articulate that word. Theſe birds are very common through all India, where they neſtle in the towns on the roofs of houſes, like the ſwallows in Europe." *Voyage de Mandeſlo*, t. II. p. 144.

† *Voyage autour du Monde*, par Gemelli Carreri, *Paris*, 1719, *t. V. p.* 5.

‡ Recueil des Voyages qui ont ſervi à l'etabliſſement de la Compagnie des Indes, &c. *Amſterdam*, 1702, *t. V. p.* 26.

§ Dampier. || Gemelli Carreri.

thoſe

thoſe of Sunda *. Their name *kakatoes*, *catacua*, and *cacatou*, is formed from their cry †. They are eaſily diſtinguiſhed from the other Parrots, by their white plumage, by the rounder and more hooked ſhape of their bill, and particularly by a creſt of long feathers, which they can raiſe or depreſs at pleaſure ‡.

It is difficult to teach the Cockatoos to prattle, and ſome ſpecies can never acquire the imitation. But they are more eaſily bred §; they all grow tame, and in ſome parts of India they ſeem domeſticated, for they build their neſts on the roofs of the houſes. And this facility of education ſeems to reſult from their ſuperior underſtanding; they are more attentive and obedient than other Parrots, and they ſtrive, though without ſucceſs, to repeat what they hear. Their defects are compenſated by other expreſſions of feeling, and by affectionate careſſes. All their motions have a gentleneſs and grace which adds new charms to their beauty. Two of theſe birds, a male and a female, were ſhewn in March 1775 at the fair of St. Germain at Paris. They diſco-

* Voyage de Siam, par le P. Tackard, *Paris*, 1686, *p.* 130.

† "We made ſeveral tacks to double the iſle of Cacatoua, ſo called becauſe of the white Parrots that reſide in it, and which inceſſantly repeat that name. This iſle is very near Sumatra." *Ibid.*

‡ The crown of the head, which is covered by the long reclined feathers, is entirely bald.

§ "At Ternate, theſe birds are domeſtic and docile; they ſpeak little, but ſcream much." *Gemelli Carreri.*

vered great docility, raiſed their creſt, made a ſalute with their head, touched with their bill or their tongue, anſwered their keeper's queſtions with a ſign of aſſent, as they were deſired; they marked by repeated motions the number of perſons in the room, the colour of their clothes, the hour of the day, &c.; they billed each other without being directed, an evident token of their inclination to couple, and their keeper told us that they had often commerce together even in our climate.—Though the Cockatoos, like the other Parrots, uſe their bill in climbing, they have not the ſame heavy unpleaſant gait; they are, on the contrary, very agile, and walk gracefully, tripping with ſhort quick ſteps.

THE WHITE-CRESTED COCKATOO.

Le Kakatoès a Huppe Blanche, Buff.

FIRST SPECIES.

Pſittacus Criſtatus, Linn. Gmel. and Borowſk.
Cacatua, Briſſ.
Kakatoëa tota alba, Klein.
Pſittacus albus Criſtatus, Ray and Will.

IT is nearly as large as a hen. Its plumage is entirely white, except a yellow tinge on the under

under ſide of the wings, and of the lateral quills of the tail; the bill and feet are black. Its noble creſt is very remarkable, conſiſting of ten or twelve feathers, not of the ſoft downy kind, but of the nature of quills, tall and broad webbed; they are inſerted in two parallel lines running back from the face, and form a double fan [A].

THE YELLOW-CRESTED COCKATOO.

Le Kakatoes a Huppe Jaune, Buff.

SECOND SPECIES.

Pſittacus Sulphureus, Gmel.
Cacatua Luteo-criſtata, Briſſ.
The *Creſted Parrot or Cockatoo*, Albin.
The *Leſſer White Cockatoo*, Edw. and Lath.

OF this ſpecies, there are two branches, differing in ſize. In both the plumage is white, with a yellow caſt under the wings and the tail, and ſpots of the ſame colour round the eyes; the creſt is yellow citron, conſiſting of long ſoft ragged feathers, which the bird elevates and projects; the bill and feet are black. It was a Cockatoo of this ſpecies, and probably the firſt ever ſeen in Italy, that Aldrovandus

[A] Specific character of the *Pſittacus Criſtatus*: "It is white, its creſt pliant and yellow."

deſcribes; and he admires its elegance and beauty. It is as intelligent, gentle, and docile, as the preceding.

We ſaw this beautiful Cockatoo alive. It expreſſes joy by ſhaking its head briſkly ſeveral times upwards and downwards, making a ſlight cracking with its bill, and diſplaying its elegant creſt. It returns the careſſes; touches the face with its tongue, and ſeems to lick it; the kiſſes are ſoft and gentle. When the one hand is laid flat under its body, and the other reſts on its back, or only touches its bill, it preſſes firmly, claps its wings, and with its bill half open it blows and pants, and ſeems to feel the moſt intoxicating delight. It repeats this as often as one chooſes. It is alſo very fond of being ſcratched; holds its head, and raiſes its wing to be ſtroked: it often whets its bill, by gnawing and breaking bits of wood. It cannot bear the confinement of the cage, but it never roves out of its maſter's ſight. It anſwers its call, and retires when he commands; in which caſe it diſcovers anxiety, often looking back for the ſign of invitation. It is exceedingly neat; all its motions are graceful, delicate, and pretty. It feeds on fruits, pulſe, all the farinaceous grains, on paſtry, eggs, milk, and whatever is ſweet, but not too ſugary.

[A] Specific character of the *Pſittacus Sulphureus*: "It is white, its creſt pliant and drawn to a point; and this, with a ſpot below the eyes, is brimſtone colour."

85

The RED-CRESTED COCKATOO.

Le Kakatoës à Hüppe Rouge, Buff.

THIRD SPECIES.

Pſittacus Moluccenſis, Gmel.
Pſittacus Roſaceus, Lath. Ind.
Cacatua Rubro-criſtata, Briſſ. and Gerini.
The *Greater Cockatoo*, Edw.
The *Great Red-creſted Cockatoo*, Lath.

IT is one of the largeſt of the genus, being near a foot and half long; the upper part of its creſt, which reclines backwards, conſiſts of white feathers, and covers a bundle of red ones [A].

The LITTLE FLESH-BILLED COCKATOO.

Le Petit Kakatoës a Bec Couleur de Chair, Buff.

FOURTH SPECIES.

Pſittacus Erythroleucus, Linn. Gmel. Ray, and Will.
The *Red and White Parrot*, Lath.

THE plumage is entirely white, except ſome tints of pale red on the temples, and on

[A] Specific character of the *Pſittacus Moluccenſis*: "It is white, inclining to a dilute roſe colour; its creſt is red above; the lateral feathers of its tail below, from the baſe to the middle, brimſtone coloured."

the feathers of the upper part of the creſt, which red caſt is deeper on the coverts of the lower ſurface of the tail. There is a little light yellow at the origin of the ſcapular feathers and of thoſe of the creſt, and on the inſide of the quills of the wing and of moſt of thoſe of the tail; the feet are blackiſh; the bill reddiſh brown, which is peculiar to this ſpecies, the bills of the other Cockatoos being all black. It is alſo the leaſt of the genus; Briſſon makes it of the ſize of the Guinea Parrot, but it is much ſmaller. It has a creſt, which lies flat, and is erected at pleaſure.

We may obſerve that the bird termed by Briſſon the *Cockatoo with red wings and tail* does not appear to belong to the ſame genus, ſince he makes no mention of the creſt, which is the diſtinguiſhing character. Beſides, he borrows his account from Aldrovandus, who deſcribes it in the following terms. "This Parrot ought to be reckoned among the largeſt; it is equal in ſize to the capon; all its plumage is cinereous white; its bill is black and much incurvated; the lower part of the back, the rump, all the tail, and the quills of the wings, are vermilion." Theſe characters would correſpond to thoſe of the Cockatoos, if the creſt were added; and this great red and white Parrot of Aldrovandus might perhaps form a fifth ſpecies, or a variety of one of the preceding.

[A] Specific character of the *Pſittacus Erythroleucus*; "It is cinereous; the quills of its wings are white crimſon."

The BLACK COCKATOO,

Buff. and *Lath.*

FIFTH SPECIES.

Pſittacus Aterrimus, Gmel.

EDWARDS, who deſcribes this Cockatoo, aſſerts that it is as large as a maccaw. Its plumage is entirely bluiſh black, which is deeper on the back and the wings than under the body; the creſt is brown or blackiſh, and the bird has, like the other Cockatoos, the power of erecting it high, and of reclining it almoſt cloſe on the head; the cheeks below the eye are covered by a red, naked, wrinkled ſkin, which covers the inferior mandible of the bill, whoſe colour, as well as that of the feet, is blackiſh brown; the eye is fine black. The bird may be reckoned the negro of the Cockatoos, which are generally white; the tail is long, and conſiſts of tapered feathers. The figure delineated from nature was ſent from Ceylon to Edwards, and that naturaliſt recogniſed the ſame bird in a collection publiſhed by *Vander Meulen* at Amſterdam, in 1707, and termed by *Peter Schenk* the *Indian Crow*.

[A] Specific character of the *Pſittacus Aterrimus*: "It is black, its creſt large and lighter coloured, its cheeks red and naked."

The PARROTS
PROPERLY SO CALLED.

WE ſhall apply the name of Parrot to thoſe of the old continent whoſe tail is ſhort, and conſiſts of quills nearly equal in length. We may reckon eight ſpecies, all natives of Africa or India, and none of them found in America.

THE
JACO or CINEREOUS PARROT, *Buff.*

FIRST SPECIES.

Pſittacus Erithacus, Linn. Gmel. and Kram.
Pſittacus Guineenſis Cinereus, Briſſ.
Uſchgraver Papagey, Wirs.
The *Aſh-coloured Parrot*, Albin. Will. and Lath.

THIS ſpecies is now the moſt commonly brought into Europe, and generally preferred, as well on account of the mildneſs of its diſpoſition, as of its ſagacity and docility, in which it at leaſt equals the green Parrot, without the diſagreeable cries. It ſeems to pronounce the word *Jaco*, and hence its uſual appellation. All the body is of a fine pearl and flaty gray, which is deeper on the upper ſurface, lighter on the lower, and inclined to white on the belly.

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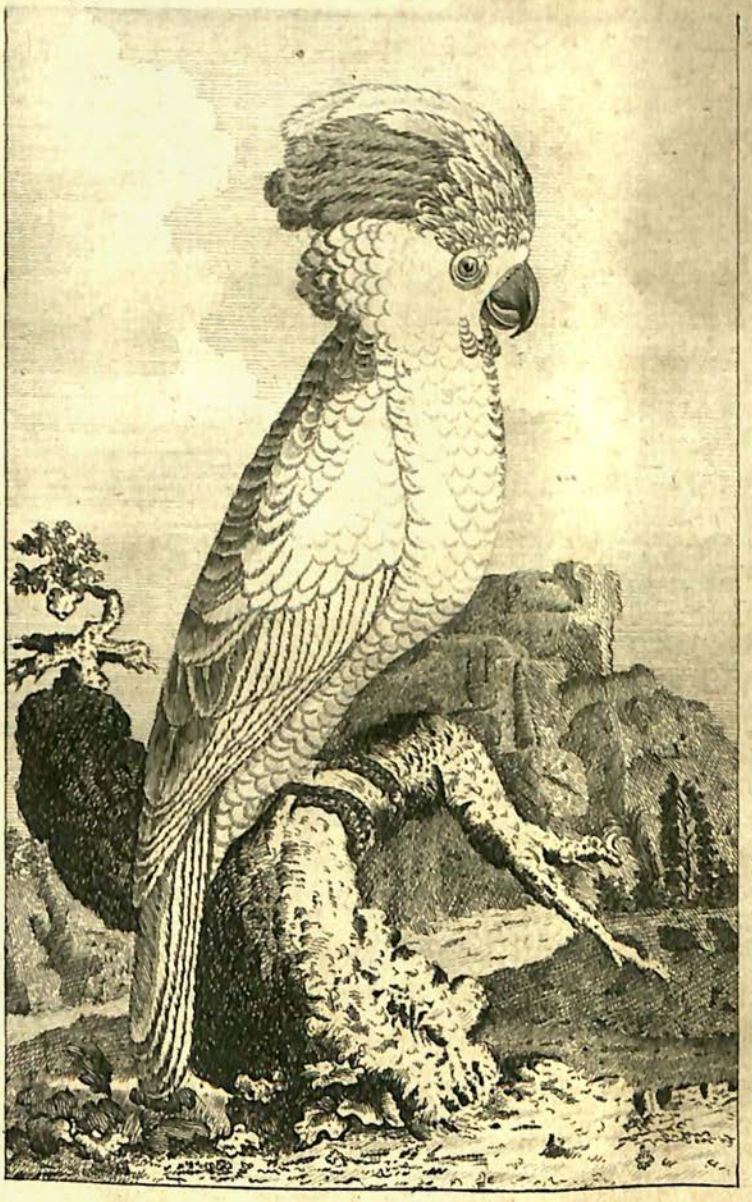


THE GREAT WHITE COCKATOO.

belly. The tail, which is vermilion, terminates and heightens this plumage, which is gloſſed and powdered with a ſnowy colour, that gives it conſtantly a freſh appearance. The eye is placed in a white, naked, mealy ſkin, that covers the check; the bill is black; the feet gray; and the iris gold colour. The total length of the bird is a foot.

Moſt of theſe Parrots are imported from the coaſt of Guinea*, and come from the interior parts of Africa†: they are alſo found at Congo‡,

* Willughby.

† "They are found on the whole of this coaſt (of Guinea), but in ſmall numbers, and moſt of them even come from the interior parts of the country. Thoſe of Benin, of Calbari, of Cabolopez, are moſt eſteemed, for which reaſon they are brought from thoſe places; but they are much older than ſuch as can be obtained here, and conſequently are not ſo docile, nor ſo eaſily trained. All the Parrots here on the coaſt, and alſo near the angle of Guinea, and in the above-mentioned places, are of a blue colour . . . Theſe birds are ſo common in Holland, that they are leſs eſteemed there than here, and not ſold ſo dear." *Voyage en Guinée*, par Boſman, *Utrecht*, 1705.—Albin is miſtaken when he ſays that this ſpecies comes from the Eaſt Indies; it appears confined to Africa, and *à fortiori* it occurs not in America, though Briſſon places it at Jamaica, probably from the indication of Browne and Sloane; but without having conſulted them, ſince Sloane (Jamaica, *Vol. II. p* 297) ſays expreſsly that the Parrots, which are numerous in Jamaica, were all brought thither from Guinea. This ſpecies is not a native of any part of the new world. "Among the multitude of Parrots found at Para, we cannot perceive the gray ſpecies, which is ſo common in Guinea." *Voyage de la Condamine, p.* 173.—In Antarctic France there is no gray kind found, as in Guinea, and in upper Africa. *Thevet*, Singularités de la France Antarctique, *Paris*, 1558, *p.* 92.

‡ Recueil des Voyages qui ont ſervi à l'établiſſement de la Compagnie des Indes. *Amſterdam*, 1702, *t. IV. p.* 321.

and

and on the coaſt of Angola *. They are very eaſily taught to ſpeak †, and ſeem fondeſt of imitating the voice of children, who are alſo the moſt ſucceſsful in training them. It has indeed been remarked by the older writers ‡ that the birds moſt ſuſceptible of imitating the human voice are eager to liſten to children, whoſe articulation is imperfect and unequal, and therefore more correſpondent to their own. But the cinereous Parrot copies alſo the deep tones of the adult; though the effort is laborious, and the words are leſs diſtinct. One of theſe Guinea Parrots was ſo completely drilled by an old ſailor, that it acquired exactly his hoarſe voice and cough; and though it was afterwards given to a young perſon, and was in no other company, it never forgot the leſſons of its firſt maſter, and it was diverting to obſerve its tranſitions from a ſoft gracious tone to its former hoarſeneſs and coarſe ſea tones.

* Hiſtorie Generale des Voyages, *t. V. p.* 76.

† They inhabit likewiſe the iſles of France and Bourbon, whither they have been tranſported. *Lettres Edifiantes, Recueil* 18, p. 11. "This iſle (of Mauritius or France) breeds tortoiſes, turtles, grey parrots, and other game, which are caught by the hand in the woods. Beſides the profit derived from this exerciſe, it affords much diverſion. Sometimes when a great Parrot is taken, it is made to ſcream, and inſtantly hundreds flock round it, which are killed with ſticks." *Recueil des Voyages qui ont ſervi a l'établiſſement de la Compagnie des Indes. Amſterdam*, 1702, *t. III. p.* 195.

‡ Albertus, *Lib. XXIII.*

But

But not only has this bird a facility, it has alſo an eagerneſs, in imitating the human voice. It liſtens with attention, and ſtrives to repeat; it dwells conſtantly on ſome ſyllables which it has heard, and ſeeks to ſurpaſs every voice by the loudneſs of its own. We are often ſurpriſed at its repeating words or ſounds, which we never taught it, and which we ſhould not ſuppoſe it to have noticed *. It ſeems to ſet itſelf taſks, and tries every day to retain its leſſon †. This engages its attention even in ſleep, and, according to Marcgrave, it prattles in its dreams ‡. They are moſt capable of improvement when young; then they ſhew more ſagacity, more docility: and their memory, if early cultivated, becomes ſometimes aſtoniſhing. Rhodiginus § mentions a Parrot which a Cardinal purchaſed for 100 crowns, becauſe it *recited correctly the Apoſtles' Creed* ||. But when

* Witneſs that Parrot of Henry VIII. which, as Aldrovandus relates, having fallen into the Thames, called to the boatmen for aſſiſtance, as it had heard the paſſengers call from the beach.

† Cardan goes ſo far as to aſcribe to it meditation and inward reflection on what it has been taught, and this, ſays he, through emulation and the love of glory . . *Meditatur ob ſtudium gloriæ* . . : The love of the marvellous muſt have had mighty influence upon this philoſopher, to make him advance ſuch abſurdities.

‡ Ariſtotle had propoſed a quære, whether animals hatched from eggs ever dream (*Lib. V.* 10. *Hiſt. Anim.*) Marcgrave anſwers, that "his Parrot Laura often roſe in the night, and prattled half aſleep."

§ *Lib. III.* 32.

|| M. de la Borde tells us that he ſaw one, which ſerved as almoner on board a veſſel; it recited the ſailors prayer, then the roſary.

it

it grows older, it becomes ſtubborn, and will hardly be taught. Olina recommends the evening, after their meal, as the proper time to inſtruct them; for their wants being ſatisfied, they are moſt docile and attentive.

The education of the Parrot has been compared to that of the child *. At Rome, the perſon who trained a Parrot held in his hand a ſmall rod, with which he ſtruck it on the head. Pliny ſays that its ſkull is very hard, and that it requires ſmart blows to make it feel †. However, the bird which we mentioned feared the rod more than a child that has been often whipped. If after remaining perched the whole day, it anticipated the hour of walking out into the garden, and deſcended too ſoon (which ſeldom happened), threats and the ſight of the rod drove it with precipitation to its rooſt; there it continued, but ſhowed its impatience by flapping its wings and ſcreaming.

"We ſhould ſuppoſe that the Parrot does not perceive when he ſpeaks himſelf, but fancies that ſome perſon addreſſes him. He often aſked his paw, and anſwered by holding up the paw. Though he liked to hear the voice of children, he ſeemed to have an antipathy to them; he purſued and bit them till he drew blood. He had alſo his objects of attachment, and though his choice was not very nice, it was conſtant,

* Ælian. † Pliny, *Lib. X.* 42.

He

He was exceſſively fond of the cook-maid; followed her every where, ſought for her, and ſeldom miſſed finding her. If ſhe had been ſome time out of his ſight, the bird climbed with his bill and claws to her ſhoulders, laviſhed his careſſes, and would, on no account, leave her. His fondneſs had all the marks of cloſe and warm friendſhip. The girl happened to have a very ſore finger, which was tedious in healing, and ſo painful as to make her ſcream. While ſhe uttered her moans, the Parrot never left her chamber. The firſt thing he did every day was to pay her a viſit; and this tender condolence laſted the whole time of the cure, and he again returned to his former calm ſettled attachment. Yet this ſtrong predilection for the girl ſeems to have been more directed to her office in the kitchen, than her perſon; for when another cook-maid ſucceeded to her, the Parrot ſhewed the ſame degree of fondneſs the very firſt day *."

But Parrots of this kind not only imitate diſcourſe; they alſo mimic geſtures and actions. Scaliger ſaw one that performed the dance of the Savoyards, at the ſame time repeating their ſong. The one already mentioned liked to hear a perſon ſing, and, when he ſaw him dance, he alſo tried to caper, but with the worſt grace imaginable, holding in his toes, and

* Note communicated by Madame Nadault, my ſiſter, to whom this Parrot belonged.

tumbling

tumbling back clumſily. He was then the moſt cheerful; but he had alſo an extravagant joy, and an inceſſant prattling when in the ſtate of intoxication: for all Parrots love wine, particularly the Spaniſh and the muſcadine. Even in the time of Pliny it was remarked that the fumes of that liquor gave the Parrots a flow of ſpirits*. He crept near the fire in winter, and his greateſt pleaſure, in that ſeaſon, was to get on the chimney; and when warmed he gave many ſigns of his comfortable feelings. He had equal pleaſure in the ſummer ſhowers; he continued whole hours expoſed, and ſpread his wings the better to receive the rain, and did not ſeek for cover till he was wet to the ſkin. After he had returned to his rooſt, he ſtripped all the feathers one after another through his bill. If the weather was dry, he liked to bathe in a ciſtern of water, and entered into it repeatedly, though always very careful not to wet his head. But he was as averſe to plunge in winter; and if then ſhewn a veſſel full of water, he would run off, and even ſcream.

Sometimes he was obſerved to yawn, and this was almoſt always the ſymptom of wearineſs. He whiſtled with more force and clearneſs than a man; but, though he expreſſed many tones, he could never be taught to copy an air. He imitated perfectly the cries of wild

* *In vino præcipue laſciva.* Lib. X. 42.

and

and domeſtic animals, particularly the crow, which he mimicked ſo well, that he might have been taken for one. He ſeldom prattled in a room with company; but if alone in the adjacent room, he was noiſy in proportion to the loudneſs of the converſation which he overheard; he ſeemed prompted to repeat precipitately all that he had learnt, and was never ſo animated or ſo clamorous. In the evening he retired of his own accord to his cage, which he ſhunned during the day: there with one foot concealed in the plumage, or hooked to the bars of the cage, and his head beneath his wings, he ſlept until he perceived the dawn of the morning; but he often wakened to the blaze of candles. Then he ſtepped down to the bottom of the cage, and ſharpened his claws, uſing the ſame motion with the ſcratching of a hen. Sometimes he whiſtled or prattled in the night when expoſed to light; but in the dark he was ſilent and tranquil *

That ſort of ſociety which the Parrot forms with man, is, by means of language, more intimate and pleaſing than what the monkey can claim from its antic imitation of our geſtures and actions. If the uſeful and amiable qualities of the dog, the horſe, or the elephant, command our attention and eſteem, the ſingular talents of the

* Reſt of the note communicated by Madame Nadault.

prattling bird ſometimes engage more powerfully our curioſity. It diverts and amuſes; in ſolitude it is company; it takes part in converſation, it laughs, it breathes tender expreſſions, or mimics grave diſcourſe; and its words uttered indiſcriminately pleaſe by their incongruity, and ſometimes excite ſurpriſe by their aptneſs *. This play of language without meaning is uncommonly whimſical, and though not more empty than much other talk, it is always more amuſing. The Parrot ſeems alſo to receive a tincture of our inclinations and manners; it loves, or it hates; it has particular attachments, predilections, and caprices; it is the object of its own admiration and applauſe; it becomes joyous or ſad; it is melted by careſſes, and bills tenderly in return: in a houſe of mourning, it learns to moan †, and often accuſtomed to repeat the dear name of a miſtreſs

* Willughby ſpeaks from Cluſius of a Parrot, which, when a perſon ſaid to it, *Laugh, Poll, laugh*, laughed accordingly, and the inſtant after ſcreamed out, *What a fool to make me laugh!* We have ſeen another which grew old with its maſter, and ſhared with him the infirmities of age. Being accuſtomed to hear ſcarce any thing but the words *I am ſick* (Je ſuis malade); when a perſon aſked it, *How d'ye, Poll, how d'ye* (Qu'as-tu, perroquet, qu'as-tu)? *I am ſick*, it replied with a doleful tone, ſtretching itſelf over the fire, *I am ſick* (Je ſuis malade).

† *See*, in the Annals of Conſtantine Manaſſes, the ſtory of the young Prince Leo, ſon of the Emperor Baſil, condemned to death by his implacable father, whom the cries of the perſons around him could not move, till the accents of the bird, which had learnt to deplore the fate of the Prince, at laſt ſtung his barbarous heart.

whoſe

whoſe loſs is bewailed, it awakens, in feeling hearts, the memory of paſt joys*.

The power of imitating exactly articulate diſcourſe implies in the Parrot a peculiar and more perfect ſtructure of organ; and the accuracy of its memory, though independent of the underſtanding, manifeſts a cloſeneſs of attention and a ſtrength of mechanical recollection that no bird poſſes in ſo high a degree. Accordingly, all the naturaliſts have remarked the ſingular form of its bill, its tongue, and its head: its bill, round on the outſide and hollow within, has, in ſome meaſure, the capacity of a mouth, and allows the tongue to play freely; and the ſound, ſtriking againſt the circular border of the lower mandible, is there modified as on a row of teeth; while the concavity of the upper mandible reflects it like the palate; and hence it does not utter a whiſtling, but a full, articulation. The tongue, which modulates all the ſounds, is proportionally larger than in man, and would be more voluble, were it not harder than fleſh, and inveſted with a ſtrong horny membrane.

But this organization, though adjuſted with ſkill, is ſtill inferior to the ſtructure contrived to give an eaſy and powerful motion to the upper mandible, and, at the ſame time, not to hinder its opening. The muſcles are not fixed

* *See*, in Aldrovandus (p. 662), a pleaſing and affecting piece, which a poet, who grieves for his miſtreſs, addreſſes to his Parrot, that inceſſantly repeats her name.

to the root, where they would have exerted no force; nor to the ſides, where they would have cloſed the aperture. Nature has adopted a different plan; at the bottom of the bill are fixed two bones, which, extending on both ſides, and under the cheeks, form a continuation of it, ſimilar in form to the *pterygoid* bones in man, except that their hinder extremity is not concreted into another bone, but looſe. Thick layers of muſcles, ſent off from the back of the head, and inſerted in theſe bones, move them and the bill. For a fuller deſcription of this ſingular contrivance, I ſhall refer to Aldrovandus *.

This naturaliſt properly obſerves, that, between the eye and the lower jaw, there is a ſpace, which deſerves better the name of cheek than in any other bird; it is alſo more protuberant, occaſioned by the number of muſcles that extend over it to the bill.

The bill is very ſtrong; the Parrot eaſily cracks the nuts of the red fruits; it gnaws the wood, and even bends or wrenches the bars of its cage, if they be ſlender, or if it be tired of confinement. It uſes its bill, oftener than its claws, in climbing and ſuſpending itſelf; it alſo holds by the bill in deſcending, as if it were a third foot, which ſteadies its motion; it alſo ſerves to break its fall †. It is a ſecond organ

* *Tom. I. pp.* 640 *and* 641. † Pliny, *Lib. X.* 42.

of touch, and is equally uſeful with its toes, in ſcrambling and clenching.

The mobility of its upper mandible gives it a power which no other birds have, of chewing its food. In thoſe, whether of the granivorous or carnivorous tribes, the bill is like a hand which throws the food into the gizzard, or an arm which ſplits or tears it. The Parrot ſeizes the piece ſideways, and gnaws deliberately *. The lower mandible has little motion, but that from right to left is moſt perceptible; and this is often performed when the bird is not eating, which has made it be ſuppoſed to ruminate. In ſuch caſes it probably only whets the edge of this mandible, with which it cuts and bites its aliments.

The Parrot diſcovers hardly any choice in its food: it lives in its native country on almoſt every ſort of fruit or grain. The ſeeds of the baſtard ſaffron † have been found to fatten it, though they act on man as a violent purge ‡. In the domeſtic ſtate, it eats whatever is pre-

* We muſt remark that the external hind toe is moveable, and that the bird draws it ſidewiſe and forward, to ſeize and handle what is given to it; but only in this ſingle caſe does it uſe that power, and at other times, whether it walks or perches, it conſtantly carries two toes before and two behind. Apuleius and Solinus ſpeak of Parrots with five toes; but this was owing to their miſtaking a paſſage of Pliny, where that naturaliſt aſcribes that uncommon property to a family of magpies (*Lib. X. 42.*)

† *Carthamus Carduncellus*, Linn.

‡ The Spaniards call this ſeed *Semi de Papagey*, Parrot-ſeed.

ſented; but fleſh, which it would rather prefer, is extremely hurtful to it, and occaſions an unnatural longing, which prompts it to ſuck and gnaw its feathers, and pluck them one by one from every part that its bill can reach. This cinereous Guinea Parrot is particularly ſubject to that diſeaſe; it tears the feathers from its body, and even from its beautiful tail, which never afterwards recovers the ſame bright red as at firſt.

Sometimes after moulting this Parrot is obſerved to become marbled with white and roſe colour; occaſioned either by ſome diſtemper, or by advanced age.

What Briſſon reckons as varieties, under the names of the *Red-winged Guinea Parrot*, and the *Red variegated Guinea Parrot*, are owing to ſuch accidental changes of plumage. In the one figured by Edwards, the red feathers are mingled at random with the gray, as if the bird had been dreſſed out *(tapired)*. The cinereous Parrot is like others of the genus, ſubject to the epilepſy and the cramp *; yet is it very hardy and lives to a great age †. Salerne ſays that he ſaw one at Orleans which was above ſixty years old, and ſtill cheerful and lively ‡.

It

* Olina. *Occelleria, p.* 23.

† "I knew one at the Cape of St. Domingo, which was averred to be forty-ſix years old." *Note communicated by M. de la Borde.*

‡ Voſmaer ſays that he knew a Parrot which had lived in a family

It is uncommon for Parrots to propagate in our temperate climates; but they frequently lay addle eggs. There are ſome inſtances, however, of Parrots being reared in France. M. de le Pigeoniere had a cock and hen in the town of Marmande in Agenois, which hatched regularly each ſpring for five or ſix years, and the young Parrots lived, and were educated by the parents. Each hatch conſiſted of four eggs, three of which ſucceeded. The birds were ſhut in a room with nothing but a barrel open at top and filled with ſaw duſt; ſticks were faſtened both on the outſide and inſide, that the male might ſcramble upwards and downwards, and ſit beſide the hen. In entering the room it was neceſſary to have boots; for the male, fired by jealouſy, bit furiouſly whatever he perceived to approach his female *. Father Labat alſo mentions two Parrots that had ſeveral hatches at Paris †.

mily for an hundred years, having deſcended from father to ſon: but Olina, more credible and better informed, aſcribes only twenty years for the average term of the Parrot.

* Letter dated from *Marmande en Agenois*, 25th Auguſt, 1774.

† Nouveaux Voyages aux îles de l'Amerique. *Paris*, 1722, *t. II. p.* 160.

[A] Specific character of the Aſh-coloured Parrot, *Pſittacus Erithacus*: "It is hoary, its temples white and naked, its tail crimſon."

34057

The GREEN PARROT.

SECOND SPECIES.

Pſittacus Sinenſis, Gmel. and Briſſ.
The *Green and Red Chineſe Parrot*, Edw. and Lath.

EDWARDS deſcribes this bird as brought from China. But it is not found in moſt of the provinces of that vaſt empire; it is confined to the moſt ſouthern, ſuch as Quanton and Quangſi *, which are near the tropic, the uſual limit of the climate of Parrots. This is probably one of thoſe which travellers have fancied were the ſame both in China and in America. But that notion, which is contrary to the general order of nature, is overturned by comparing each ſpecies in detail. The preſent is unlike any of the Parrots of the new world: it is as large as a middle-ſized hen; the whole of its body is bright ſhining green; the great quills of the wing and the ſhoulders are blue; the flanks, and the under ſide of the top of the wing, brilliant red; the quills of the wings and tail are lined with brown.—Edwards ſays that it is very

* "The ſouthern provinces, ſuch as Quanton, and eſpecially Quangſi, have Parrots of all kinds, which differ in nothing from thoſe of America: their plumage is the ſame, and they have no leſs facility in learning to ſpeak." *Hiſtoire Generale des Voyages*, t. VI. p. 488.

rare.

rare. It is found in the Moluccas, and in New Guinea, whence it was ſent to us [A].

The VARIEGATED PARROT.

THIRD SPECIES.

Pſittacus Accipitrinus, Linn. Gmel. Gerini, & Borowſk.
Pſittacus Varius Indicus, Briſſ.
Pſittacus Elegans, Cluſius.
The *Hawk-headed Parrot*, Edw. and Lath.

IT is of the ſize of a pigeon. The feathers round the neck, which it briſtles when angry, but which Cluſius overdoes in his figure, are purple, edged with blue. The head is covered with feathers mixed with ſtreaks of brown and white, as in the plumage of the hawk, and hence Edwards applies the epithet of *Hawk-headed.* There is ſome blue on the great quills of the wing, and at the point of the lateral ones of the tail, of which the two middle ones are green, and ſo are the feathers on the upper ſide of the body.

The mailed Parrot, *No.* 526, *Pl. Enl.* appears to be the ſame with the one juſt deſcribed; and we preſume that the ſmall number of theſe

[A] Specific character of the *Pſittacus Sinenſis:* "It is green; the lower coverts of its wings red; ſome of the greater ones, and the margin, blue; the tail brown below."

birds which have been brought from America to France were introduced from India into the new world, and that if they are found in the interior parts of Guiana, they have been naturalized there like the canaries, finches, the Guinea pig, and ſome other animals, that were carried thither by navigators from the old continent. That this ſpecies is not a native of America ſeems evinced, becauſe no traveller mentions it. Beſides, its voice, which is ſhrill and acute, is different from that of all the other Parrots indigenous in that continent; and we may therefore conclude that it originated from a few individuals carried accidentally from India [A].

The VAZA, or BLACK PARROT*,

FOURTH SPECIES.

Pſittacus Niger. Linn. Gmel. Klein. and Gerin.
Pſittacus Madagaſcarenſis, Briſſ.
The *Black Parrot of Madagaſcar,* Edw. and Lath.

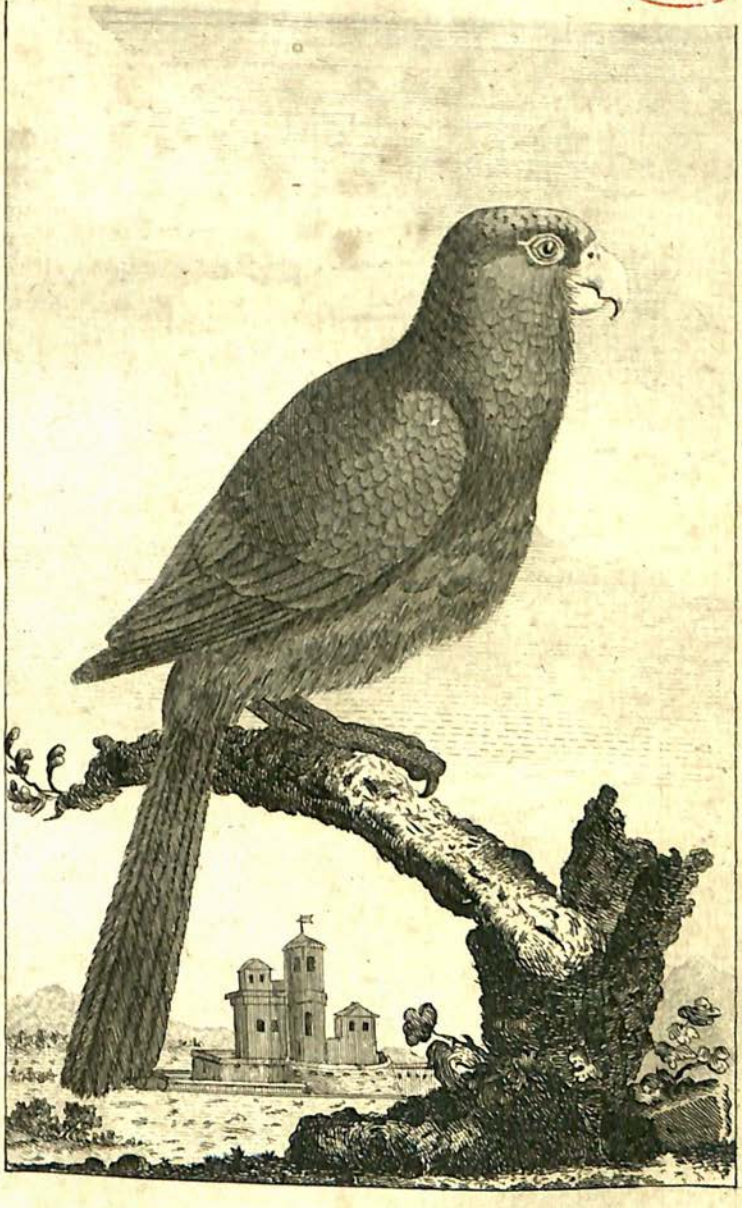
VAZA is the name which this ſpecies bears in Madagaſcar, according to Flaccourt, who

[A] Specific character of the *Pſittacus Accipitrinus:* "It is green; its head gray; its neck and breaſt ſomewhat violet and variegated; the quills of its wings and tail tipt with blue."

* *Vaza* is the black Parrot of this country; ſome of the young are brown red, but they are difficult to be had." *Voyage au Madagaſcar,* par Flaccourt. *Paris,* 1661.

ROYAL ASIATIC

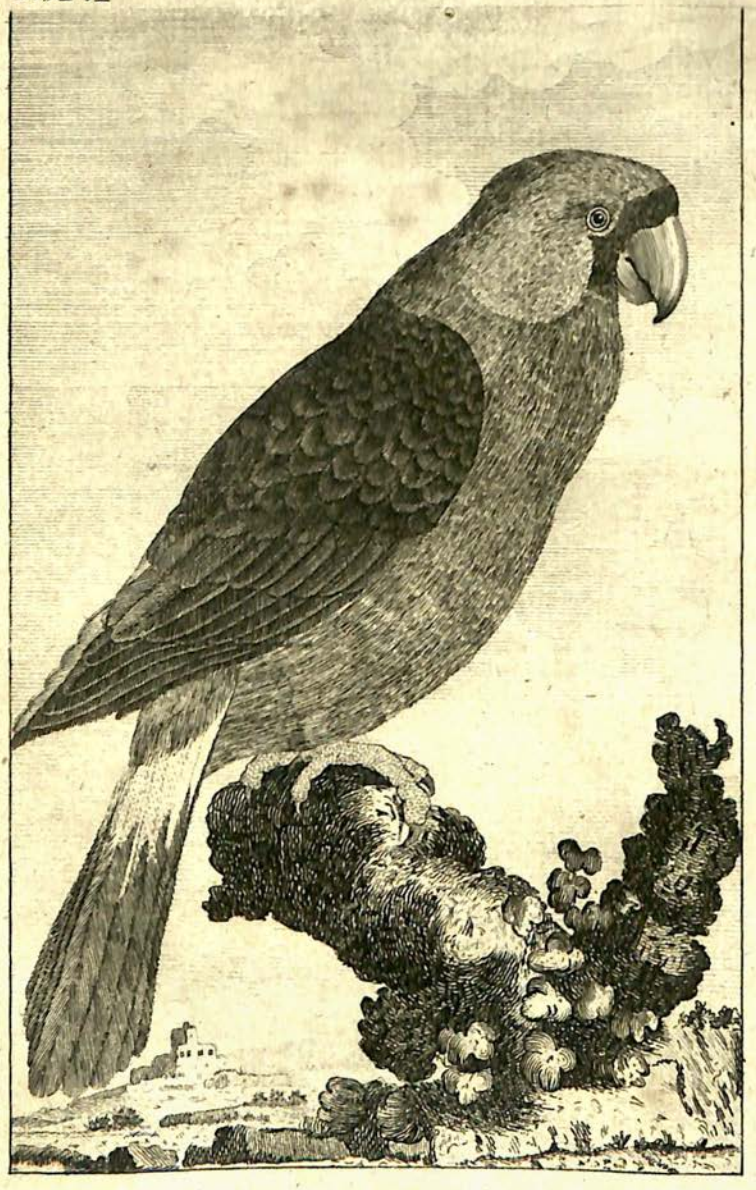
N.° 140



THE BLACK PARROT.

ROYAL ASIATIC SOCIETY

N°. 141



THE MASCARINE PARROT.

adds that it imitates the human voice. Rennefort alſo mentions it *; and it is the ſame with what Francis Cauche calls *Woures-meinte* †; which, in the Madagaſcar dialect, ſignifies the black bird. Aldrovandus likewiſe takes notice of black Parrots that inhabit Ethiopia ‡. The Vaza is as large as the cinerous Guinea Parrot, and is uniformly black over its whole plumage; the colour is not indeed intenſe, but inclined to brown, and tinged faintly with violet. It has a remarkably ſmall bill; its tail is, on the contrary, of conſiderable length. Edwards, who ſaw it alive, ſays that it is a very familiar and lovely bird [A].

The MASCARINE.

FIFTH SPECIES.

Pſittacus Maſcarinus, Linn. Gmel. and Briſſ.

THIS Parrot is ſo called, becauſe, round its bill, there is a kind of black maſk which

* "At Madagaſcar the large Parrots are black." *Relation de Rennefort, Hiſt. Gen. des Voy.* t. VIII. p. 606.

† *Voyage au Madagaſcar*, par Fr. Cauche, *Paris*, 1651.

‡ *Tom. I. p.* 636.

[A] Specific character of the *Pſittacus Niger*: "Its tail elongated and equal; its body bluiſh black; its bill and orbits whitiſh."

envelopes

envelopes the forehead, the throat, and the border of the face. Its bill is red; a gray hood covers the back of the head and neck; all the body is brown; the quills of the tail, which are brown two thirds of their length, are white at their origin. The total length of this Parrot is thirteen inches. The Viſcount Querhoent aſſures us, that it is found in the iſland of Bourbon, whither it has probably been carried from Madagaſcar. We have one in the King's Cabinet of the ſame ſize and colour, except that it has not the black maſk, nor the white colour on the tail, and that all its body is equally brown; its bill is alſo ſmaller, and, in that reſpect, it reſembles the Vaza, of which it would appear to be a variety, if it does not form an intermediate ſpecies between that bird and the maſcarine. To the ſame ſpecies we would refer the *brown Parrot* of Briſſon.

[A] Specific character of the *Pſittacus Maſcarinus*: "It is cinereous, with the bridle black below; its orbits naked and reddiſh; its lateral tail-feathers whitiſh at their baſe."

The BLOODY-BILLED PARROT.

Le Parroquet a Bec Couleur du Sang, Buff.

SIXTH SPECIES.

Pſittacus Macrorhyncos, Gmel.
The *Great-bellied Parrot*, Lath.

THIS Parrot is found in New Guinea. It is remarkably large. Its bill is blood-coloured, thicker and broader in proportion than that of any of the other Parrots, and even than that of the American maccaws. The head and neck are of a brilliant green with gold reflections; the fore part of the body is yellow ſhaded with green; the tail is yellow below and green above; the back is ſky blue; the wing appears tinged with a mixture of the ſame ſky blue and green, according to its different poſitions; the coverts are black, edged and ſprinkled with ſtreaks of gold yellow; this Parrot is fourteen inches long.

[A] Specific character of the *Pſittacus Macrorynchos*: "It is green, inclining below to yellow; its wings mixed with ſky blue and green; its coverts black."

The GREAT BLUE-HEADED GREEN PARROT.

SEVENTH SPECIES.

Pſittacus Gramineus, Gmel.
The *Amboyna Parrot*, Lath.

THIS is one of the largeſt of the Parrots; it is near ſixteen inches in length, though its tail is rather ſhort. The face and the upper ſide of the head, are blue; all the upper ſurface is meadow-green, mixed with blue on the great quills; all the under ſurface is olive-green: the tail is green above, and dirty yellow below [A].

The GRAY-HEADED PARROT.

EIGHTH SPECIES.

Pſittacus Senegalus, Linn. Gmel. and Briſſ.
The Senegal Parrot, Lath.

THIS bird has a ſhort tail, which excludes it from the family of the Parrakeets; and though only ſeven inches and a half long, it is

[A] Specific character of the *Pſittacus Gramineus*: "It is green, below olive; its front and top blue; its tail yellow below."

thick

thick and round ſhaped. Its head and face are of a gloſſy bluiſh gray; its ſtomach and all the under ſide of its body are of a full marigold-yellow, ſometimes mixed with aurora red; its breaſt and all its upper ſurface green; except the quills of the wings, which are only edged with that colour on a brown gray ground.

Theſe Parrots are frequent in Senegal; they fly in ſmall flocks of five or ſix, and perch on the ſtraggling trees in the burning, ſandy plains of that country, and utter a ſhrill, diſagreeable cry. They keep cloſe together, ſo that a perſon may kill ſeveral at once; and it often happens that a ſingle ſhot levels with the ground the whole of the little flock. Le Maire affirms that they never ſpeak*; but perhaps they have been neglected in their education.

* "The Parrots are theſe of two kinds (at Senegal); ſome ſmall and entirely green, others larger, having the head gray, the belly yellow, the wings green, and the back mixed with gray and yellow; the latter never ſpeak, but the ſmaller have a ſweet, clear voice, and prattle whatever they are taught." *Voyage de le Maire. Paris*, 1695, *p.* 107.

[A] Specific character of the *Fſittacus Senegalus:* "It is green, below yellow; its head cinereous; its orbits black and naked."

The LORIS.

THIS name has been applied in the Eaſt Indies to a family of Parrots whoſe cry reſembles the ſound of the word *lori*. They are hardly diſtinguiſhed from the reſt of the genus, except by their plumage, which is chiefly red, and of various intenſity. Their bill is alſo ſmaller, not ſo much hooked, but ſharper than that of the other Parrots. Their aſpect is lively, their voice ſhrill, and their motions quick. They are, according to Edwards, the moſt nimble of all the Parrots, and the only ones that can leap to the height of a foot. Theſe well aſcertained facts confute the aſſertion of a traveller, that they brood in ſilent melancholy *.

They are taught with great eaſe to whiſtle and articulate words; they ſoon grow tame, and, what is uncommon in all animals, they retain their cheerfulneſs in captivity. But they are in general very delicate, and difficult to tranſport; and, in our temperate climates, they are ſhort lived. Even in their native regions, they are ſubject to epileptic fits, like the maccaws and other Parrots; yet it is probable that this diſorder attacks only the domeſticated birds.

* *Hiſt. Gen. des Voy.* t. X. p. 459.

" Ornithologiſts

"Ornithologiſts have improperly," ſays Sonnerat *, "diſcriminated the Loris by the epithets of the *Philippine*, the *Eaſt Indian*, the *Chineſe*, &c. Theſe birds inhabit only the Moluccas and New Guinea, and thoſe found in other parts have been carried thither." But theſe nomenclators are guilty of a greater impropriety in reckoning ſome ſpecies of Loris as natives of America, ſince none exiſt there; and, if travellers have ſeen a few individuals, they muſt have been introduced from the Aſiatic iſlands.

Sonnerat adds too, that he conſtantly found the Loris in one iſland to be of a different ſpecies from thoſe in another, though at a ſhort diſtance only. A ſimilar obſervation has been made in regard to the iſlands of the Weſt Indies.

The NOIRA-LORI.

FIRST SPECIES.

Pſittacus Garrulus, three Varieties, Gmel.
Lorius Moluccenſis, Briſſ. and Gerini.

THIS bird is found at Ternate †, at Ceram, and at Java, where it is called *Noira*, a name

* *Voyage à la Nouvelle Guinee, p.* 173.

† "There are many beautiful Parrots in the iſle of Ternate, which are red on the back, with little feathers on the fore ſide of the

name which the Dutch have adopted. It is held in ſuch high eſtimation in India, that ten reals are readily offered for one Noira. In the account of the firſt voyage from Holland to Java, it is ſaid that ſeveral of theſe beautiful birds, which were tried to be brought home, all died on the paſſage*. In the ſecond voyage, however, one was carried to Amſterdam; and, ſince that time, they have been more frequent.

The Noira ſhews ſtrong attachment, and even affection, to its maſter; it careſſes him with its bill, and ſtrokes his hair with ſurpriſing gentleneſs and tameneſs. At the ſame time it cannot bear ſtrangers, and bites them with a ſort of rancour. The natives of Java breed many of theſe birds†. In general the cuſtom of keeping tame Parrots ſeems to have been very ancient in India, ſince Ælian mentions it [A].

the wings. They are ſomewhat ſmaller than thoſe of the Weſt Indies, but they learn much better to ſpeak." *Argenſola*, Conquêtes des Moluques. *Paris*, 1706, *t. III. p.* 21.

* Linſcot *apud Cluſium. Auct. p.* 364.

† "The Dutch paſſed into the apartment of the Parrots, which appeared to them much more beautiful than what they had ſeen in other places, but of a moderate ſize. The Portugueſe give them the name of *noyras*: they have a bright gloſſy red on the throat and under the ſtomach, and a beautiful gold plate on the back." *Hiſt. Gen. des Voy. t. VIII. p.* 136.

[A] Briſſon thus deſcribes his *Lorius Moluccenſis*: "It is ſcarlet; the ſpot on the upper part of its back and the upper coverts of the wings, yellow; the quills of the wings green externally and above, below pale roſe-colour, within ſaffron tipt with black; the lateral quills of the tail above, crimſon on their firſt half, and green on the other; the two outermoſt mixed externally on their laſt half with deep violet."

VARIETIES of the NOIRA.

I*. To the Noira we ought perhaps to refer the Java Parrot mentioned by Aldrovandus, and which the inhabitants of that iſland term *nor*, which means brilliant. The whole of the body is of a deep red; the wings and the tail are of a deep green; there is a yellow ſpot on the back, and a ſmall border of the ſame colour on the ſhoulder. Of the feathers of the wings, which when cloſed appear entirely green, the coverts only, and the ſmall quills, are yellow, and the large ones are brown.

II†. The Lori deſcribed by Briſſon under the name of the *Ceram Lori*, and to which he applies what we have aſcribed to the Noira, is only a variety, and in no reſpect different, except that its legs are green, while thoſe of the former are red, like the reſt of the body.

* This is the ſecond variety of Linnæus' *Pſittacus Garrulus*.

† *Pſittacus Garrulus*, Linn. Gmel. and Borowſk.
Lorius Ceramenſis, Briſſ.
Pſittacus Rufus, femoribus alisque viridibus, Fris. & Klein.
The *Purple Parrot*, Charlton.
The *Scarlet Parrakeeto with green and black wings*, Will.
The *Ceram Lory*, Lath.

[A] Specific character: "It is red; its orbits cinereous; its cheeks and wings green; its tail-quills blue on their poſterior half."

The COLLARED LORY.

SECOND SPECIES.

Pſittacus Domicella, Linn. Gmel. and Borowſk.
Lorius Orientalis Indicus, Briſſ.
The *Second Black-capped Lory*, Edw.
The *Purple-capped Lory*, Lath.

ALL the body, including the tail, is of a deep blood colour; the wing is green, the top of the head is black, terminated with violet on the nape; the legs and the fold of the wing are of a fine blue; the lower part of the neck is furniſhed with a yellow collar, which we have adopted as the ſpecific character.

The bird figured in the *Planches Enluminées* under the name of the *Eaſt Indian Lory*, and which Briſſon deſcribes by the ſame appellation, appears to be the female of this; for the only difference is that it wants the yellow collar, and that the blue ſpot on the top of its wing is not ſo broad; it is alſo ſomewhat ſmaller. This Lory is like all the reſt of the kind, very gentle and familiar; but it is alſo very delicate and difficult to breed. None more eaſily learns to ſpeak, and even with diſtinctneſs. "I have ſeen one," ſays Aublet, "which repeated every thing it heard the firſt time *." Though this

* "It had come from India to the Iſle of France, and had been given to me by the Count d'Eſtaing; it was aſtoniſhing." *Note communicated by M. Aublet.*

capacity

capacity is very aſtoniſhing, there is no reaſon to doubt of it*. This bird is valued very high; Albin ſays that he ſaw one ſold for twenty guineas.—We may regard the *Eaſt Indian collared Lory* as a variety of this ſpecies [A].

The TRICOLOR LORY.

THIRD SPECIES.

Pſittacus-Lory, Linn. Gmel. and Borowſk.
Lorius Philippenſis, Briſſ.
The *Firſt Black-capped Lory*, Edw. and Lath.

THE fine red, the azure, and the green, which are diſpoſed in large ſpots on the plumage of this Lory, have induced us to give it the epithet of *Tricolor*. The forepart and the ſides of the neck, the flanks, the lower part of the back, the rump and half the tail, are red. The under ſide of the body, the legs, and the top of the back, are blue; the wing is

* "The Dutch had one that in a moment imitated the cries of the other animals which it heard." *Second Voyage des Hollandois.* Hiſt. Gen. des Voy. t. VIII. p. 377.—"All voyagers ſpeak with admiration of the facility with which the Parrots of the Moluccas can repeat what they hear. Their colours are variegated, and form an agreeable mixture; they ſcream much, and very loud."—*Ibid.*

[A] Specific character of the *Pſittacus-Domicella:* "It is red; its cap violet: its wings green; its ſhoulders and knees blue; its orbits brown."

green, and the point of the tail, blue; the crown of the head is covered by a black cap. The bird is near ten inches long. Few are ſo beautiful, both on account of the brilliancy of the colours, and their elegant contraſt. Edwards ſaw it alive, and terms it the *Little Lory*; it whiſtled pleaſantly, he ſays, and pronounced ſeveral words diſtinctly; and, leaping briſkly on its rooſt or on the finger, it called with a ſoft clear voice, *Lory, lory*. It played with the hand, and ran after perſons, hopping like a ſparrow. This charming bird lived but a few months in England. The ſpecimen which we have deſcribed was brought by Sonnerat from the iſland Yolo, which the Spaniards claim as one of the Philippines, and the Dutch as one of the Moluccas [A].

The CRIMSON LORY.

FOURTH SPECIES.

Pſittacus Puniceus, Gmel.
Lorius Amboinenſis, Briſſ.

THIS Lory is near eleven inches long. We term it *crimſon*, becauſe the red of its plumage, the face except, is not ſo brilliant as

[A] Specific character of the *Pſittacus-Lory*: "It is purple; its cap violet; its wings green; its breaſt, its cheeks, and its tail, blue; its orbits ſomewhat carnation."

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ASIATIC

N°. 142

THE LORY.

in the others, and has a dull brown caſt on the wing. The blue of the top of the neck and of the ſtomach is weak, and inclined to violet; but, on the fold of the wing, it is bright and azure, and, at the edge of the great quills, it is loſt in their blackiſh ground; the tail is of a ſmoky red below, and of the ſame tile-red above, as the back. This is not the only ſpecies ſeen at Amboyna, and from Gemelli Carreri the following alſo appears to be found there [A].

The RED LORY.

FIFTH SPECIES.

Pſittacus Ruber, Gmel.
The *Molucca Lory*, Lath.

It is entirely red, except the tip of the wing, which is blackiſh, and two blue ſpots on the back, and one of the ſame colour on the under coverts of the tail. It is ten inches long, and appears to be a new ſpecies. It is improperly termed the *Chineſe Lory* in the *Pl. Enlum.* for voyagers never mention the Lories as found in China *, and one of our beſt obſervers,

[A] Specific character of the *Pſittacus Puniceus*: "It is deep ſcarlet, below white; the leſſer and inferior coverts of its wings, and the inner and under ſide of its wing-quills are blackiſh brown."

* "At Amboyna there are many ſpecies of Parrots, and among

ſervers, M. Sonnerat, aſſures us, on the contrary, that they are all inhabitants of the Moluccas and of New Guinea. In fact, the *Gilolo Lory* * of this author ſeems to be exactly the ſame with the preſent [A].

The RED and VIOLET LORY.

SIXTH SPECIES.

Pſittacus Guebienſis, Gmel.
The *Gueby Lory*, Lath.

THIS bird has hitherto been found only at Gueby. All the body is of a ſhining red, regularly ſcaled with violet brown from the back of the head, paſſing by the ſides of the neck, as far as the belly; the wing is broken by red and black, in ſuch a manner that this laſt colour terminates all the points of the quills, and marks a part of their webs; the ſmall quills and their coverts neareſt the body are dun-violet; the tail is copper red. The total length of the bird, eight inches [B].

others is one which has all its feathers carnation." *Voyage autour du monde*, par Gemelli Carreri, t. V. p. 236.

* Voyage à la nouvelle Guinee, p. 177.

[A] Specific character of the *Pſittacus Ruber:* "It is red; the ſpace about the eyes and the wing-quills black; the ſpot on the wings and the lower coverts of the tail ſky-blue; the tail tipt with bay."

[B] Specific character of the *Pſittacus Guebienſis:* "It is brilliant red; its wing-quills ſtriped tranſverſely with black; its tail brown-red."

The GREAT LORY, *Buff.*

SEVENTH SPECIES.

Pſittacus Grandis, Gmel.
The *Grand Lory*, Lath.

THIS is the largeſt of all the Loris; it is thirteen inches long. The head and neck are of a fine red; the lower part of the neck, where it joins the back, is violet blue; the breaſt is richly clouded with red, blue, violet, and green, and the mixture of green and fine red is continued under the belly; the great quills, and the edge of the wing, from the ſhoulder, are ſky blue; the reſt of the upper ſurface is dull red. Half of the tail is red, the tip yellow.

It appears that Voſmaer deſcribes the ſame ſpecies by the name of *Ceylon Lory*. It was probably carried from a greater diſtance to that iſland, and thence brought into Holland; but it lived there only a few months.

The PARRAKEET LORIS.

THE following ſpecies are almoſt entirely red, like the Loris, but their tail is longer, though not ſo long as that of the Parrakeets. We ſhall therefore conſider them as forming the intermediate gradation.

The RED PARRAKEET LORY, *Buff.*

FIRST SPECIES.

Pſittacus Borneus, Linn. and Gmel.
Pſittaca Coccinea Bonarum Fortunarum Inſulæ, Briſſ.
The *Long-tailed Scarlet Lory*, Edw. and Lath.

THE plumage of this bird is almoſt wholly red, except ſome of the coverts and the tips of the quills of the wing and of the tail, which are partly green and partly blue. The total length is eight inches and a half. Edwards ſays that it is very rare, and that a traveller brought it from Borneo, and gave it to Sir Hans Sloane.

[A] Specific character of the *Pſittacus Borneus*, as given by Mr. Latham: "It is red; the quills of its wings and tail green; a blue ſpot on its wings, its orbits brown."

The VIOLET and RED PARRAKEET LORY, *Buff.*

SECOND SPECIES.

Pſittacus Indicus, Gmel.
Pſittacus Coccineus, Lath. Ind.
Pſittaca Indica Coccinea, Briſſ.
The *Indian Lory*, Lath. Syn.

THE prevailing colour is red, mixed with violet blue. The bird is ten inches long, and its tail occupies near one third of that ſpace. The tail is entirely of a full blue, which alſo covers the flanks, the ſtomach, the top of the back, and of the head; the great quills of the wing are yellow; all the reſt of the plumage is of a fine red, edged with black, which is diſpoſed in feſtoons on the wings.

[A] Specific character of the *Pſittacus Indicus*: "It is ſcarlet, variegated with brown and violet; the upper parts of its head and neck, its breaſt, and a band behind the eyes, violet; the tips of the greater tail-quills dilute brown, thoſe of the leſſer, and the coverts, brown violet."

THE
TRICOLOR PARRAKEET LORY.

THIRD SPECIES.

Pſittacus Amboinenſis, Linn. and Gmel.
Pſittaca Amboinenſis Coccinea, Briſſ.
The *Amboyna Red-Parrot*, Lath.

RED, green, and turkey blue, are diſpoſed in large marks over all its plumage; red covers the head, the neck, and all the upper ſide of the body; the wing is deep green; the back and tail are of a full velvet blue. The tail is ſeven inches long; and the whole bird is fifteen inches and a half long, and as large as a turtle. —The tail in theſe three laſt ſpecies, though longer than common in the Loris and Parrakeets properly ſo called, is not tapered as in the long-tailed Parrakeets, but conſiſts of equal quills, with a ſquare termination.[A]

[A] Specific character of the *Pſittacus Amboinenſis*: "It is ſcarlet; its back blue; its wings with a green ſpot."

PARRAKEETS
OF THE OLD CONTINENT.

PARRAKEETS
IN WHICH THE TAIL IS LONG AND EQUALLY TAPERED.

WE ſhall diſtinguiſh the long-tail Parrakeets into two families; into thoſe which have the tailequally tapered, and into thoſe which have the two middle quills much longer than the reſt, and appearing detached from each other. All theſe Parrakeets are larger than the ſhort-tailed ones, which we ſhall afterwards deſcribe.

THE
GREAT COLLARED PARRAKEET.

La Grande Perruche a Collier d'un Rouge Vif, Buff.

FIRST SPECIES,
With a long, equally tapered Tail.

Pſittacus-Alexandri, Linn. Gmel. Scop. and Bor.
Pſittacus Torquatus Macrourus, Ray.
Perrocello, Olin.
The *Ring Parrakeet*, Edw. and Will.
The *Alexandrine Parrakeet*, Lath.

PLINY and Solinus have both deſcribed the green collared Parakeet, which was the only one

one known in their time, and which came from India. Apuleius delineates it with that elegance which he uſually affects *, and ſays that its plumage is of a pure brilliant green. The only interruption of this colour is, according to Pliny, a half collar of bright red on the top of the neck †. Aldrovandus, who has collected all the particulars, leaves no room to doubt but that the *long-tailed and collared* Parrot of the ancients is the ſame with the red collared Great Parrakeet of this article. There are two circumſtances ſufficient to evince this; the firſt is the breadth of the collar, which, about the middle, is equal to the *thickneſs of the little finger*, and the ſecond, that there is a red ſpot which marks *the top of the wing*. Both theſe are peculiarly the properties of this Parrakeet. It is equally beautiful with the reſt of the tribe: its plumage is of a lively light green on the head, and deeper on the wings and the back; the roſy half-collar embracing the back of the neck, joins, on the ſides, to the black bar that covers the throat; the breaſt is of a vermilion red, and there is a purple ſpot on the crown of the head: the tail is beautiful, and longer than the body; its upper ſurface mixed with green and beryl, its under ſurface of a delicate yellow. The bird is found, not only

* Florid. *Lib. II.*

† *Viridem toto corpore, torque tantum miniato in cervice diſtinctam.* Plin. *Lib. X.* 42.

on the ſouth of the continent of Aſia, but alſo in the adjacent iſlands, and at Ceylon; for this is Taprobana, from which Alexander's fleet brought the firſt Parrot into Greece [A].

The DOUBLE COLLARED PARRAKEET.

SECOND SPECIES,
With a long and equal Tail.

Pſittacus-Alexandri, ſecond Variety, Gmel.
The *Double-ringed Parrakeet*, Lath.

TWO ſmall wings, the one roſe-coloured, and the other blue, entirely encircle the neck; all its plumage is green, which is deeper on the back, has a yellow caſt under the body, and, in many parts, there is a duſky ſtreak on the middle of each feather; below the tail, a yelloviſh fringe edges the brown-gray, which is impreſſed on each quill. The bird is as large as a turtle; and, as it is found in the iſland of Bourbon, it probably inhabits alſo the correſponding continent, either of Africa or India.

[A] Specific character of the *Pſittacus-Alexandri*: "It is green; its collar and breaſt red; its throat black."

The RED-HEADED PARRAKEET.

THIRD SPECIES,
With a long and equal Tail.

Pſittacus Erythrocephalus, Gmel.
Pſittaca Ginginiana, Briſſ.
The *Bloſſom-headed Parrakeet*, Lath.

THIS Parrakeet is eleven inches total length, and the tail is longer than the body. The whole of the upper ſide is dull green, with a purple ſpot on the top of the wing; the face is purpliſh red, which, on the head, runs into blue, and is intercepted, on the nape of the neck, by a ſtreak produced from the black that covers the throat; the under ſide of the body is a dull dirty yellow; the bill is red [A].

THE

BLUE-HEADED PARRAKEET.

FOURTH SPECIES,
With a long and equal Tail.

Pſittacus Cyanocephalus, Linn. Gmel. Briſſ. and Gerini.
The *Blue-headed Parrot*, Lath.

IT is ten inches long; its bill is white, its head blue, its body green; the fore-ſide of

[A] Specific character of the *Pſittacus Erythrocephalus*: "It is green; its head red, mixed with blue; its throat black, with a black and pale green collar."

its

its neck yellow, and the under ſurface of its belly and tail yellow mixed with green; the middle quills of the tail have a blue caſt above; the legs are bluiſh [A].

The LORY PARRAKEET.

FIFTH SPECIES,
With a long and equal Tail.

Pſittacus Ornatus, Linn. Gmel. and Bor.
Pſittaca Indica Varia, Briſſ.

WE adopt the name which Edwards has beſtowed on this ſpecies, becauſe it is of a beautiful red, like the loris; that colour, interſected by ſmall brown waves, covers the throat, the fore-part of the neck, and the ſides of the face, as far as the back of the head, which it ſurrounds. The crown of the head is purpliſh, Edwards' terms it blue; the back, the upper ſurface of the neck, the wings, and the ſtomach, are emerald green; the ſides of the neck, and the flanks, are irregularly ſpotted with orange yellow; the great quills of the wing are blackiſh, fringed at the end with yellow; the tail, which is green above, appears tinged below with red, and is yellow at the tip; the

[A] Specific character of the *Pſittacus Cyanocephalus*: "It is green; its head and throat blue."

bill

bill and feet are white-gray. This Parrakeet is about the middle ſize, and is only ſeven inches and a half long. It is one of the handſomeſt, on account of the brilliancy and choice of its colours. It is not the *paradiſe bird* of Seba, as Briſſon ſuppoſes; for in that bird the tail is unequally tapered [A].

THE

YELLOW PARRAKEET, *Buff.*

SIXTH SPECIES,
With a long and unequal Tail.

Pſittacus Solſtitialis, Linn. and Gmel.
Pſittaca Angolenſis Lutea, Briſſ.
Pſittacus Croceus, Klein.
Pſittacus Luteus, cauda longa, Fris.
The *Angola Yellow Parrot*, Alb. and Lath.

ALL its plumage is yellow, except the belly and the ring of the eye, which are red, and the quills of the wing, with a part of thoſe of the tail, which are blue: the former are interſected near their middle by a yellowiſh bar. Albin tells us that it can learn to ſpeak, and, though he calls it the Angola Parrot, he ſays it comes from the Eaſt Indies [B].

[A] Specific character of the *Pſittacus Ornatus*: "It is yellow-green; the back of its head, its throat, and its breaſt, red; its top, and its ears, blue, with cinereous orbits."

[B] Specific character of the *Pſittacus Solſtitialis*: "It is yellow; the coverts of its wings green; its orbits red; its lateral tail-quills blue exteriorly."

THE AZURE-HEADED PARRAKEET.

SEVENTH SPECIES.
With a long and equal Tail.

Pſittacus Var. 4. Gmel.
Pſittacus Cyanocephalus Indicus, Briſſ.
The *Blue-headed Parrakeet*, Edw. and Lath.

THIS Parrakeet is of the ſize of a pigeon; all its head, face, and throat, are of a fine ſky-blue; there is a little yellow on the wings; the tail is blue, equally tapered, and as long as the body; the reſt of the plumage is green. It is brought from the Eaſt Indies, according to Edwards, who deſcribes it.

The MOUSE-PARRAKEET, *Briſſ.*

EIGHTH SPECIES,
With a long and equal Tail.

Pſittacus Murinus, Gmel.
The *Grey-breaſted Parakeet*, Lath.

THIS ſpecies appears to be new, and we know not its native country. Perhaps the following extract from a voyage to the Iſle of France alludes to it*:—"The green Parra-

* Voyage à Iſle de France, 1772, *p.* 122.

keet with a gray cowl is about the bulk of a ſparrow, and cannot be tamed;" though, however, this Parrakeet is conſiderably larger than the ſparrow. We have called it the Mouſe-Parrakeet, on account of a large mark of mouſe gray that covers the breaſt, the throat, the fore-head, and the whole of the face; the reſt of the body is olive green, except the great quills of the wing, which are of a deeper green: the tail is five inches long, the body as much; the feet are gray; the bill is white gray. All the plumage is pale and diſcoloured, and gives it a ſombre air; and in point of beauty it is the moſt inferior of the family [A].

The MUSTACHO PARRAKEET.

NINTH SPECIES,
With a long and equal Tail.

Pſittacus-Pondicerianus, Gmel.

A BLACK ſtreak ſtretches between both eyes, and two large muſtachoes of the ſame colour riſe from the lower mandible, and ſpread over the ſides of the throat. The reſt of the face is white and bluiſh; the tail is green above,

[A] Specific character of the *Pſittacus Murinus*: "It is olive; its face, its throat, and its breaſt, are mouſe-coloured; its wing-quills green."

and

and straw coloured below; the back is deep green; there is ſome yellow on the coverts of the wings, of which the great quills are of a deep water-green; the ſtomach and breaſt are lilac. The bird is near eleven inches in length, and the tail occupies the half of it. It has not been hitherto noticed by any naturaliſt.

THE

BLUE-FACED PARRAKEET, *Buff.*

TENTH SPECIES,
With a long and unequal Tail.

Pſittacus Hæmatodus, Linn. and Gmel.
Pſittacus Amboinenſis Varia, Briſſ.
The *Red-breaſted Parrot*, Edw. and Lath.

THIS beautiful Parrakeet is green on the upper ſide, and the head is painted with three different colours; the face and throat with indigo, the back of the head with brown-green, and the crown with yellow; the lower part of the neck and the breaſt are red ſnuff-colour on a ground of brown green; the belly is green, the abdomen conſiſts of yellow and green, and the under ſurface of the tail is yellow. Edwards has given this bird the name of the *Red-breaſted Parrakeet*; but it appears to have been repreſented from a ſpecimen preſerved in ſpirit of

wine, and its colours were tarniſhed. Our ſpecimen was in better condition. The bird is found at Amboyna.

We ſhall regard the *Molucca Parrakeet* as either a variety of this, or a cloſely related ſpecies; its ſize and colours are nearly the ſame, only the head is entirely indigo, and there is a ſpot of the ſame colour on the belly; and the aurora-red of the breaſt is not waved, but mixed with yellow. The tail of theſe Parrakeets is as long as the body, which is ten inches; their bill is reddiſh white *.

THE

LACE-WINGED PARRAKEET,

Buff. and *Lath.*

ELEVENTH SPECIES,
With a long and equal Tail.

Pſittacus Olivaceus, Gmel.

THE wings are laced with blue, yellow, and orange; the firſt of theſe colours occupying the middle of the feathers, the two others extending to the border; the great quills are olive-brown, and the ſame colour is extended over all the body, except a bluiſh ſpot behind

* It is the firſt variety of the *Pſittacus Hæmatodus*, according to Gmelin, and denominated the *Orange-breaſted Parrot* in Latham's Synopſis.

the

the head. The bird is near eleven inches long, of which the tail is more than a third; but the wing is alſo very long, and covers near half the tail, whereas in the other Parrakeets the wings are much ſhorter.

We now proceed to enumerate thoſe Parrakeets of the old continent, whoſe tail is alſo long, but unequally tapered.

[A] Specific character of the *Pſittacus Olivaceus*: "It has on the a blue ſpot on the back of its head; its wings variegated with blue, green, and orange."

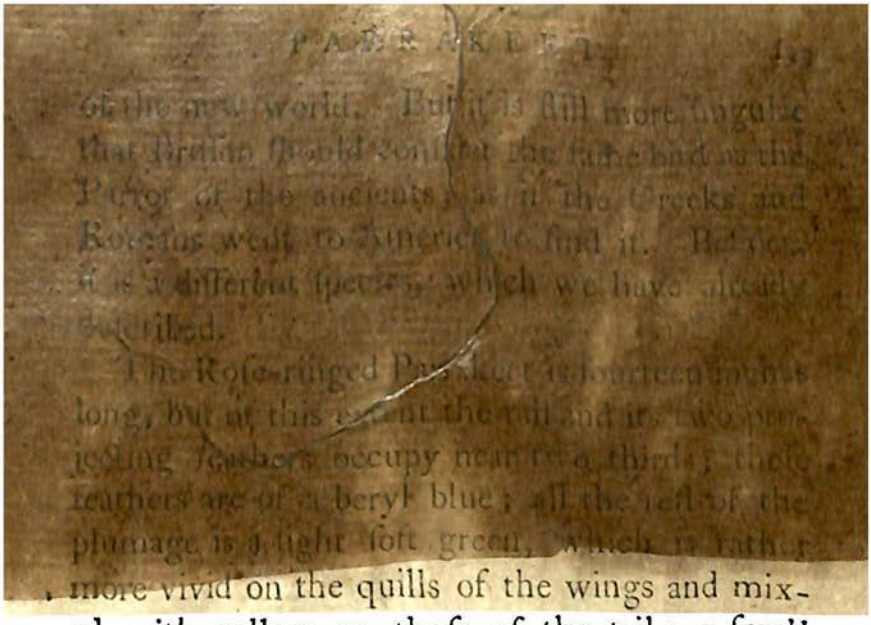
PARRAKEETS
OF THE OLD CONTINENT,
WHICH HAVE A LONG AND UNEQUAL TAIL.

The ROSE-RINGED PARRAKEET.

FIRST SPECIES,
With a long and unequal Tail.

Pſittacus-Alexandri, Second Variety, Gmel.
Pſittaca Torquata, Briſſ. and Gerini.

SO far is this Parrakeet from being peculiar to the new world, as Briſſon repreſents it, that it is there entirely unknown. It inhabits many parts of Africa, and is brought in great numbers to Cairo by the caravans of Ethiopia. The veſſels that ſail from Senegal or Guinea, where it is common, carry it with the negroes into the Weſt India iſlands. None of theſe Parrakeets are found on the continent of America; they are only ſeen near the ſettlements of St. Domingo, Martinico, Guadeloupe, &c. which the African veſſels perpetually frequent, but at Cayenne, where negroes are very ſeldom imported, they never occur. All theſe facts, which were communicated by an excellent obſerver, prove that the Roſe-ringed Parrakeet is not a native



more vivid on the quills of the wings and mixed with yellow on thoſe of the tail; a ſmall roſe collar claſps the back of the neck and joints with the black of the throat; a bluiſh tinge appears on the feathers of the nape of the neck, which recline upon the collar; the bill is brown red.

The LITTLE PARRAKEET,

With a Roſe-coloured Head and long Shafts.

SECOND SPECIES,
With a long and unequal Tail.

Pſittacus Erythrocephalus, Firſt Variety, Gmel.
Pſittacus Bengalenſis, Briſſ.
The *Parrakeet from Bengal*, Albin.
The *Roſe-headed Ring Parrakeet*, Lath.

THIS little Parrakeet, which is not more than four inches long, meaſures twelve, if the

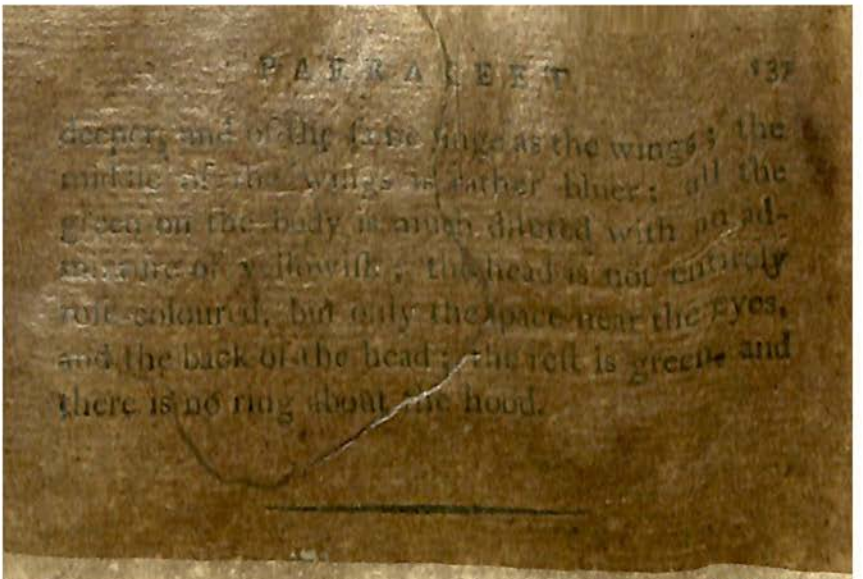
two long ſhafts be included; theſe are blue, the reſt of the tail, which is not more than two inches and a half long, is olive green, which is alſo the colour of all the under ſide of the body, and even of the upper ſide, where it is only deeper; a few ſmall red feathers appear through the plumage, on the top of the wing; the head is roſe-colour, mixed with lilac, interſected and bordered by a black ring, which, rising from the throat, encircles entirely the neck. Edwards ſpeaks with rapture of this bird: it is termed, he ſays, in Bengal *fridytutah*.

The LONG-SHAFTED GREAT PARRAKEET.

THIRD SPECIES,
With a long and unequal Tail.

Pſittacus Erythrocéphalus, Var. 3, Gmel.
The *Malacca Parrakeet*, Lath.

THE colours of this Parrakeet are ſo like thoſe of the preceding, that they might be viewed as the ſame ſpecies, were they not conſiderably different in reſpect to ſize. This is ſixteen inches long, including the two ſhafts of the tail, and the other dimenſions are proportional; the ſhafts are blue, as in the preceding; the tail is of the ſame olive green, but deeper



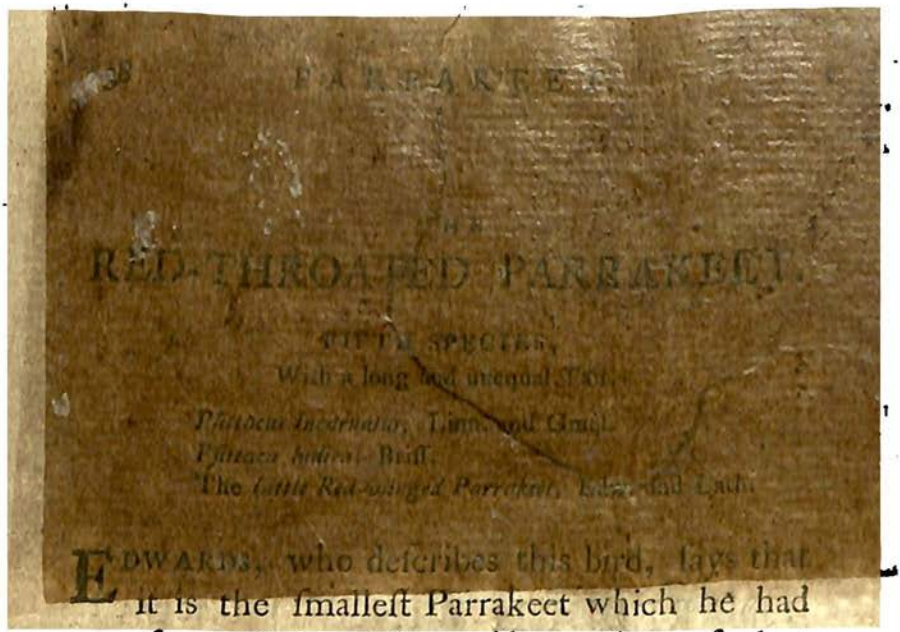
The REDDISH-WINGED GREAT PARRAKEET, *Buff.*

FOURTH SPECIES,
With a long and equal Tail.

Pſittacus-Eupatria, Linn. and Gmel.
Pſittaca Ginginiana, Briſſ.
The *Gingi Parrot*, Lath.

THIS Parrakeet is twenty inches, from the point of the bill to the extremity of the two long ſhafts of the tail: all the upper ſurface of the body is deep olive green, the under ſurface is pale green, intermixed with yellowiſh; on the pinion of each wing is a ſmall red mark, and another one of dilute blue on the middle of the long feathers of the tail; the bill is red, and alſo the feet and nails [A].

[A] Specific character of the *Pſittacus-Eupatria*: "It is green; its cheeks naked; its ſhoulders ſcarlet; its bill purpliſh."



EDWARDS, who deſcribes this bird, ſays that it is the ſmalleſt Parrakeet which he had ever ſeen, It is not larger than a titmouſe, but its tail is longer than its body; the tail and back are of a full green; the coverts of the wings and of the throat are red; the under ſide of the body is yellowiſh green; the iris of the eye is of ſo deep a caſt as to appear black, though in moſt of the Parrakeets it is gold-coloured. Edwards ſays that it comes from India.

[B] Specific character of the *Pſittacus Incarnatus*: "It is green; its bill, feet, and nails, carnation; its cere and orbits whitiſh; its throat and the coverts of its wings red."

The BLACK-BANDED GREAT PARRAKEET.

SIXTH SPECIES,
With a long and wedged Tail.

Psittacus Moluccensis, Linn. and Gmel.
Ara Moluccensis Varia, Briſſ.

THE bird, which Briſſon has termed the *Moluccа Maccaw*, is undoubtedly only a Parrakeet; for no Maccaw inhabits either India, or any part of the ancient continent. Seba calls the ſame bird a *Lory*; but the long feathers of its tail ſhew evidently that it is a Parrakeet. The total length of the bird is fourteen inches, of which the tail is near ſeven. The head has a black band, and the neck a red and green collar; the breaſt is of a fine light red; the wings and back are of a rich Turkey-blue; the belly is deep green, ſprinkled with red feathers; the tail, of which the middle quills are the largeſt, is coloured with green and red, with black edges. This Parrakeet was, according to Seba, brought from the Papuan iſlands; a Dutch ſettler at Amboyna purchaſed it of an Indian for five hundred florins. This price was not extravagant, conſidering the beauty and gentleneſs of the bird; it pronounced diſtinctly ſeveral words in different languages, it made its ſalute in the morning, and ſung its

ſong.

ſong. Its attachment equalled its accompliſhments; for having loſt its maſter, it died of melancholy * [A].

THE RED and GREEN PARRAKEET.

SEVENTH SPECIES,
With a long and unequal Tail.

Pſittaca Japanenſis, Briſſ.

THIS ſpecies has been denominated by Briſſon the *Japan Parrakeet*; but no Parrots are found in that iſland, or in the northern provinces of China, except ſuch as have been carried thither; and probably this bird, of which Aldrovandus ſaw only the figure, came from ſome more ſouthern part of Aſia. Willughby obſerves even that both the figure and its deſcription appeared ſuſpicious. The plumage is compoſed of green, red, and a little blue; the firſt of theſe colours is ſpread on the upper ſide of the body, the ſecond on the under ſide and the tail, except the two long ſhafts, which are green, and the blue that tinges the ſhoulders and the quills of the wings: there are two ſpots of the ſame colour on each ſide of the eye.

* Kæmpfer, *t. I. p.* 113.

[A] Specific character of the *Pſittacus Atricapillus*: "Above it is blue; its throat and breaſt red; its belly and vent green; its top black, with a green and black collar."

The CRESTED PARRAKEET.

EIGHTH SPECIES,
With a long and unequal Tail.

Psittacus Javanicus, Linn. and Gmel.
Platycercus Javensis Cristatus Cacatuæ, Brisſ.
The Crested Red Parrakeet, Lath.

THIS is the *ſmall Parrot of Bontius*, whoſe luſtre and variety of plumage are extolled by Willughby; the pencil can hardly imitate, he ſays, its brilliancy and beauty. It is compoſed of bright red, and of roſe colour, mixed with yellow and green on the wings, and with green and blue on the tail, which is very long, and projects beyond the wings ten inches; a remarkable exceſs in a bird which is not larger than a lark. The feathers on its head form a creſt, which muſt be very elegant, ſince it is compared to a peacock's tuft in the following extract, which ſeems to allude to this beautiful ſpecies. "This Parrakeet is about the bulk of a ſiſkin; on its head is a tuft of three or four feathers, reſembling that of the peacock. This bird is exceedingly gentle*." Theſe little Parrakeets are found in Java, in the interior parts of the country. They fly in flocks, making a great noiſe. They chatter much, and, when tamed, they eaſily repeat whatever they are taught †.

* Lettres Edifiantes, *ſecond recueil*, *p.* 69. † Willughby.

THE SHORT-TAILED PARRAKEETS OF THE OLD CONTINENT.

THESE are frequent in the ſouth of Aſia, and in Africa. They are entirely different from the Parrakeets of America, except a few which were probably carried thither. The ſpecies of Parrakeets that inhabit the old continent are much more numerous than thoſe of the new: their habits are alſo different; ſome, for inſtance, cling to a ſmall branch, and ſleep with their head hanging downwards, which is not remarked of thoſe ſettled in America.

In general, the Parrots of the new world make their neſts in the hollows of trees, particularly thoſe deſerted by the woodpeckers, which are called *carpenters* in the Weſt India iſlands *. In the old continent, on the contrary, many travellers inform us that ſeveral ſpecies of Parrots ſuſpend their neſts, which are formed with ruſhes and roots, to the ends of

* Lery poſitively avers that the American Parrots never ſuſpend their neſts, but make them in cavities of trees. *Apud Cluſium Auct. p.* 364.

flexible

flexible boughs *. This difference in the manner of neſtling, if it obtains in a great number of ſpecies, may have been prompted by the diverſity of climate. In America, where the heat never is exceſſive, it is neceſſary to concentrate it; but, in the burning plains of Africa, the neſt is rocked by the tempering breeze.

THE BLUE-HEADED PARRAKEET.

FIRST SPECIES, With a ſhort Tail.

Pſittacus-Galgulus, Linn. Gmel. and Bor.
Pſittacula Malaccenſis, Briſſ.
The *Sapphire-crowned Parrakeet*, Edw. and Lath.

THE crown of the head is of a fine blue, and round the neck is an orange half-collar; the breaſt and rump are red, and the reſt of the plumage green.

Edwards ſays that he received this bird from Sumatra: Sonnerat found it in the iſland of Luçon †.

This is one of the ſpecies that ſleep with their head hanging downwards. It lives on

* *See* the account given by Cadamoſto: *Hiſt. Gen. des Voy.* t. II. p. 305.—*Voy. à Madagaſcar* par Fr. Cauche, *Paris*, 1651.

† *Voyage à la Nouvelle Guinee, p.* 76.

callou,

callou, a kind of white liquor, which is obtained in the Eaſt Indies from the cacoa tree, by making an inciſion near the foot ſtalks that ſupport the fruit. A hollow bamboo is fixed to the extremity of the branch to collect the ſap, which when firſt drawn is pleaſant, and reſembles the taſte of new cyder.

It appeared to us that we ought to refer to the ſame ſpecies the bird mentioned by Aldrovandus, of which the crown of the head was a fine blue, the rump red, and the reſt of the plumage green. But as that naturaliſt does not take notice of the half-collar, or of the red on the breaſt, and alſo ſays that it came from Malacca, it was perhaps of a different, though cloſely related, ſpecies.

[A] Specific character of the *Pſittacus Galgulus*: "It is green; its rump and breaſt ſcarlet; the top (of the male) blue."

ROYAL ASIATIC

N.º 148

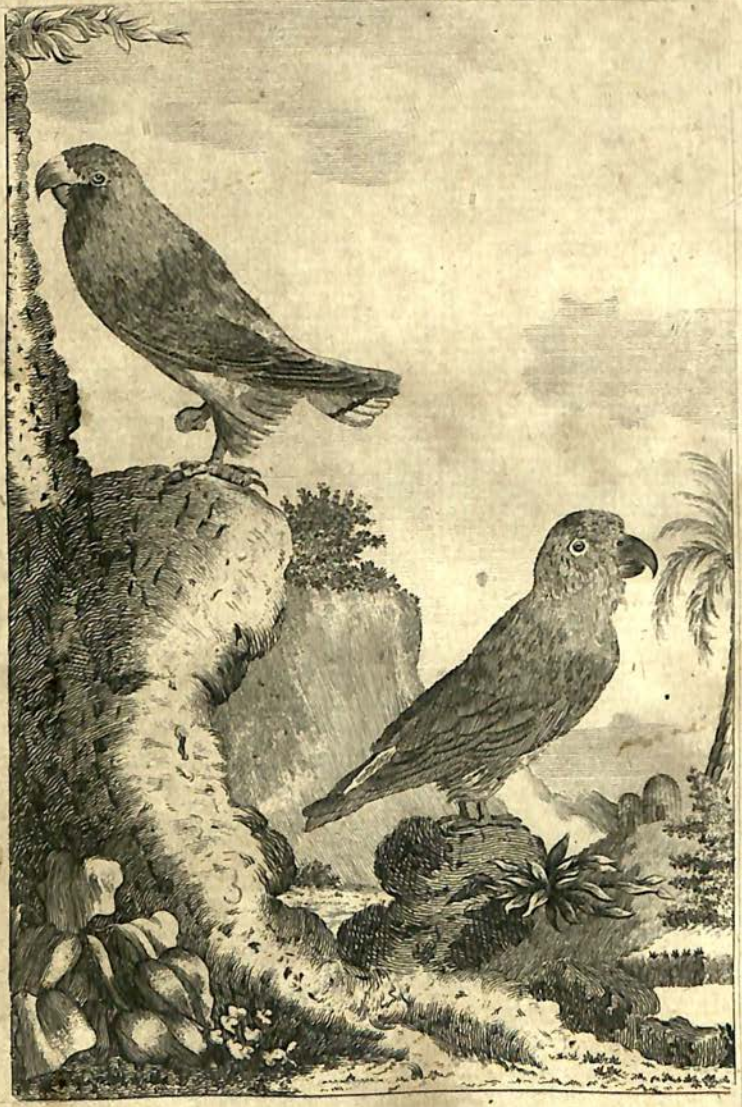


FIG 1. THE RED HEADED GUINEA PARAKEET. FIG. 2 THE PHILIPPINE PARAKEET

The RED-HEADED PARRAKEET, Or the GUINEA SPARROW.

SECOND SPECIES,
With a ſhort Tail.

Pſittacus Pullarius, Linn. Gmel. and Bor.
Pſittacula Guineenſis, Briſſ.
Pſittacus Puſillus viridis, Ray.
The *Red-headed Guinea Parrakeet*, Lath.

THIS bird is known to bird-fanciers under the name of *Guinea Sparrow* *: it is very common in that country, and is brought into Europe on account of the beauty of its plumage, its tameneſs, and gentleneſs; for it cannot be taught to ſpeak, and has only a diſagreeable ſcream. Many are loſt in the paſſage, and ſcarcely one out of ten reaches Europe †; yet they live to a conſiderable age in our climates, when fed on panic and canary ſeeds, and kept in pairs. They alſo lay ſometimes ‡, but the eggs

* "The Parroquets are called *Guinea Sparrows*," ſays Boſman, "though it would not be eaſy to aſſign the reaſon, ſince the common ſparrows are here (on the gold coaſt) extremely abundant. Their red bill is a little curved, like that of the Parrots. Theſe ſmall creatures are carried to Holland in great numbers: there they ſell very dear, though in Guinea a dozen may be purchaſed for a crown, of which nine or ten will die in the paſſage." *Hiſt. Gen. des Voy. t. IV. p.* 247.

† *Hiſt. Gen. des Voy. t. IV. p.* 64.

‡ There is no doubt but with due care theſe birds might be propagated in the domeſtic ſtate. Sometimes the force of nature alone,

eggs ſeldom hatch. If one of the pair die, the other grows melancholy, and hardly ever ſurvives. They are extremely attentive to each other; the male ſits beſide the female, and diſgorges into her bill, and he is uneaſy if ſhe be a moment out of his ſight. Thus they ſweeten their captivity, by love and gentle manners. Travellers relate that, in Guinea, theſe birds are ſo numerous as much to injure the crops*. It would ſeem that the ſpecies is diſperſed over almoſt all the ſouthern climates in the ancient continent; for it is found in Ethiopia †, in the Eaſt Indies ‡, in the iſland of Java §, as well as in Guinea ||.

Many perſons call this bird very improperly the *Braſilian ſparrow*; for it is not a native of America.—The body is entirely green, marked with a ſpot of fine blue on the rump, and by a

alone, in ſpite of the rigor of the climate and of the ſeaſon, prevails in them. Her Highneſs of Bourbon and Vermandois, Abbeſs of Beaumont-les-Tours, had two Parrakeets from Goree, that hatched two young ones in the month of January in a room without fire, but which the cold ſoon killed.

* Barbot. *Hiſt. de Guinee*, *p.* 220.

† Cluſius, *Exot. Auctuar.* *p.* 365.

‡ Albin, Vol. III. p. 7.

§ Salerne, *Ornithol.* *p.* 72.

|| "All along this coaſt they are numerous, but eſpecially near the lower part, as at Mourée, Cormantin, and Acra." *Voy. en Guinee*, par Boſman, *Utrecht*, 1705, *p.* 277. "Infinite numbers of Parrots are found at Anamaboe: they are of the bulk of ſparrows; their body is of a beautiful green; their head and tail of an admirable red, and all their figure ſo fine, that the author brought ſome to Paris, as a preſent fit for the king." *Hiſt. Gen. des Voy. t. IV. p.* 64.

flame

flame coloured maſk, mixed with a bluſh tint, which covers the forehead, encloſes the eye, and deſcends under the throat, and, in the middle of it, the bill appears of a reddiſh white; the tail is very ſhort, and appears all green when cloſed, but if diſplayed it is perceived to be interſected tranſverſely with three bars, the one red, the other black, and the third green, which borders and terminates the extremity; the pinions of the wings are blue in the male, and yellow in the female, which differs not from the former, except that its head is of a fainter red.

Cluſius has very diſtinctly deſcribed this ſpecies under the name of *Pſittacus Minimus*. Edwards, Briſſon, and Linnæus, have confounded it with the *little American Parrot painted with various colours* of Seba. But it is undoubtedly a different bird, for Seba ſays that his Parrot has not only a collar of fine ſky-blue, and a tail magnificently tinged with a mixture of five colours, viz. blue, yellow, red, brown, and deep green; but that its voice and ſong are pleaſant, and that it eaſily learns to ſpeak. It is evident that all theſe attributes belong not to the Red-headed Parrakeet. Perhaps the bird, which Seba ſaw alive, forms a ſixth ſpecies in the ſhort-tailed Parrakeets of the new continent.

A variety, or perhaps a contiguous ſpecies, may be found in the bird deſcribed by Edwards under the denomination of the *ſmalleſt green and*

red Parrakeet, which differs in no reſpect from the preceding, except that its rump is red [A].

The COULACISSI.

THIRD SPECIES
Of ſhort-tailed Parrakeet.

Pſittacus Galgulus, Var. Gmel.
Pſittacula Philippenſis, Briſſ.
The *Philippine Parrakeet*, Lath.

THIS is the name which the bird receives in its native region, the Philippine iſlands, and particularly in that of Luçon. The forehead, the throat, and the rump, are red; there is a half-collar of orange on the upper ſide of the neck; the reſt of the body, and the ſuperior coverts of the wings, are green; the great quills of the wings are deep green on the outſide, and blackiſh on the inſide; the middle quills of the wings and thoſe of the tail are green above and blue below; the bill, the feet, and the nails, are red.

The female is diſcriminated from the male by a bluiſh ſpot on each ſide of the head between the bill and the eye, and has no half-collar on the neck, or red on the throat, and the red

[A] Specific character of the *Pſittacus Pullarius*: "It is green; its front red, its tail fulvous; its bar black; its orbits cinereous."

tinge

tinge of its forehead is alſo more dilute and narrower.

Briſſon and Linnæus* confound it with Edwards's Sapphire-crowned Parrakeet, which is our Blue-headed Parrakeet, and the firſt ſpecies with a ſhort tail.

THE

GOLDEN-WINGED PARRAKEET.

FOURTH SPECIES,
With a ſhort Tail.

Pſittacus Chryſopterus, Linn. and Gmel.
Pſittacus Alis Deauratis, Briſſ.

EDWARDS gives an account of this bird. It was probably brought, he ſays, from the Eaſt Indies, but he is not quite certain. The head, the ſmall ſuperior coverts of the wings, and the whole body, are green, only it is deeper on the body than beneath; the great ſuperior coverts of the wings are orange; the four primary quills of the wings are deep blue on the outſide, brown on the inſide and at the extremity; the four next are of the ſame colour with the firſt; and laſtly, thoſe near the body are entirely green, as well as the quills of the tail; the bill is whitiſh; the feet and nails are pale fleſh colour [A].

* Syſt. Nat. *Edit. XIII.*

[A] Specific character of the *Pſittacus Chryſopterus:* "It is green; its wings marked with a blue and fulvous ſpot; its orbits naked and white."

THE

GRAY-HEADED PARRAKEET.

FIFTH SPECIES,

With a ſhort Tail.

Pſittacus Canus, Linn. and Gmel.
Pſittacula Madagaſcarienſis, Briſſ.

BRISSON is the firſt who deſcribed this bird, which he ſays is found in Madagaſcar. The head, the throat, and the lower part of the neck, are gray, inclined ſomewhat to green; the body is of a lighter green below than above; the ſuperior coverts of the wings, and the middle quills, are green; the great quills are brown on the inſide, and green on the outſide, and at the extremity; the quills of the tail are light green, with a broad tranſverſe black bar at their extremity; the bill, the feet, and the nails, are whitiſh.

[A]. Specific character of the *Pſittacus Canus*: "It is green; its head and its throat gray-green; its tail rounded, with a broad black bar."

The VARIEGATED WINGED PARRAKEET.

SIXTH SPECIES,
With a ſhort Tail.

Pſittacus Melanopterus, Gmel.
The *Black-winged Parrakeet*, Lath.

THIS Parrakeet is ſomewhat larger than the preceding ones; it is found in Batavia, and in the iſland of Luçon. We ſhall borrow the deſcription of it from Sonnerat *. "The head, neck, and belly, are light green and yellowiſh; there is a yellow bar on the wings, but each feather that forms it is edged exteriorly with blue; the ſmall feathers of the wings are greeniſh; the great ones are of a fine velvet black (ſo that the wings are variegated with yellow, blue, green, and black); the tail is of a light lilac colour; and near its extremity there is a very narrow black bar; the feet are gray; the bill and iris are reddiſh yellow."

* Voyage à la Nouvelle Guinee, *p.* 78.

THE BLUE-WINGED PARRAKEET.

SEVENTH SPECIES,
With a ſhort Tail.

Pſittacus Capenſis, Gmel.

THIS is a new ſpecies, which we received from the Cape of Good Hope, but without any accounts of its habits or of its climate. It is entirely green, except ſome quills of the wings, which are of a fine blue; the bill and feet are reddiſh.—This ſhort deſcription is ſufficient to diſcriminate it from the other ſhort-tailed Parrakeets.

The COLLARED PARRAKEET.

EIGHTH SPECIES,
With a ſhort Tail.

Pſittacus Torquatus, Gmel.

WE ſhall alſo borrow the account of this bird from Sonnerat. "It is found in the Philippines, and eſpecially in the iſland of Luçon; it is of the bulk of the Braſilian (Guinea) Sparrow; all the body is of a lively pleaſant green, which is deeper on the back, and more dilute under

under the belly, and ſhaded with yellow; behind the neck and below the head, there is a broad collar, which conſiſts, in the male, of ſky-blue feathers; but in both ſexes the feathers of the collar are variegated tranſverſely with black; the tail is ſhort, equal to the wings, and terminated in a point; the bill, feet, and iris, are blackiſh gray. This ſpecies has no merit, but in its ſhape and colours; for it is devoid of graces, and cannot be taught to ſpeak [A].

THE BLACK-WINGED PARRAKEET.

NINTH SPECIES,
With a ſhort Tail.

Pſittacus Minor, Gmel.
The *Luzonian Parrakeet*, Lath.

THIS ſpecies comes likewiſe from the iſle of Luçon, and Sonnerat thus deſcribes it. "It is rather ſmaller than the preceding; the upper ſide of the neck, the back, the ſmall feathers of the wings and of the tail, are of a deep green; the belly is light green and yelſowiſh; the crown of the head is a very bright red in the male, and the feathers, which border the

[A] Specific character of the *Pſittacus Torquatus*: "It is green; a yellow bar on its head, ſtriped acroſs with black."

upper

upper margin of the bill in the female are of the ſame bright red, and there is alſo a yellow ſpot above on the middle of the neck; in the male the throat is blue, in the female it is red; in both, the great feathers of the wings are black, thoſe that cover the upper ſurface of the tail are red; the bill, feet, and iris, are yellow. I conceive, ſays Sonnerat, theſe two Parrakeets to be the male and female, becauſe they differ little, and are analogous in their ſize, ſhape, and colour, and inhabit the ſame climate; but I will not aſſert that they may not be diſtinct ſpecies. Both ſleep hanging from branches with their heads downwards, and are fond of the ſap that flows from inciſions in the cocoa tree [A].

The ARIMANON.

TENTH SPECIES,
With a ſhort Tail.

Pſittacus Taitianus, Gmel.
The *Otaheitan Blue Parrakeet*, Lath.

THIS bird is found in the iſland of Otaheite, and lodges in the cocoa trees, whence its name *Arimanon*. We borrow the deſcription

[A] Specific character of the *Pſittacus Minor*: "It is green; its top ſcarlet; its breaſt blue; its greater wing-quills black."

from

from Commerſon. We range it after the ſhort-tailed Parrakeets, though it has a peculiar character that belongs not to any of the genus; viz. its tongue is pointed, and terminates in a pencil of ſhort white briſtles.

The plumage is entirely of a fine blue, except the throat and the lower part of the neck, which are white; the bill and feet are red. It is very common in Otaheite, where it flutters about continually ſqualling. It forms flocks, and feeds on bananas, but it is difficult to domeſticate; it dies of melancholy, eſpecially if kept alone in the cage. It cannot be brought to eat any thing but the juice of fruits, and conſtantly rejects every kind of ſolid diet.

[A] Specific character of the *Pſittacus Taitianus*: "It is blue; the feathers on its head longiſh; its throat white; its bill and feet red."

PARROTS
OF THE NEW CONTINENT.

The ARAS.

OF all the Parrots, the Ara is the largeſt, and the moſt magnificently decked; purple, gold, and azure, blaze on its plumage; its aſpect is ſteady and compoſed; its deportment grave, and even ſupercilious, and as if conſcious of its beauty. But its calm temper ſoon renders it familiar, and even ſuſceptible of a degree of attachment. It may be domeſticated without being enſlaved; it never abuſes the liberty which has been granted to it; it contracts a fondneſs for the family where it is adopted, and conſtantly returns from its rambling.

All theſe Aras are natives of the tropical parts of the new world, and inhabit both the continent and the iſlands; but none are found in Africa, or in India. Chriſtopher Columbus, in his ſecond voyage, touched at Guadeloupe, and there ſaw Aras, which he named *Guacamayas* *. They occur even in the deſert iſlands, and every-

* Herrera, *Lib. II. cap.* 10.

where

where conſtitute the fineſt ornament of thoſe gloomy foreſts with which the wild luxuriancy of nature clothes the face of the earth*.

When theſe Parrots were introduced into Europe, they were beheld with admiration. Aldrovandus, who, for the firſt time, ſaw an Ara at Mantua in 1572, remarks that they were then quite novelties, and highly eſteemed; and that princes received theſe birds from one another as rare and valuable preſents. Even Belon, that curious obſerver, had never ſeen a maccaw, for he ſays that the gray Parrots are the largeſt of all.

We know four ſpecies of Aras, viz. the red, the blue, the green, and the black. Our nomenclators enumerate ſix †, but which ought to be reduced to one half, as we ſhall afterwards find.

The characters which diſtinguiſh the Aras from the other Parrots of the new world are, 1. their ſize, which is at leaſt double that of the others; 2. the length of the tail, which is

* "While Commodore Anſon and his officers were contemplating the natural beauties of this ſolitude, a flock of Aras flew over their heads; and as if theſe birds wiſhed to improve the entertainment, and heighten the magnificence of the ſpectacle, they ſtopped to make numberleſs circles in the air, which allowed time to obſerve the luſtre and brilliancy of their plumage. Thoſe who witneſſed this ſcene cannot deſcribe it without raptures." *Anſon's Voyage round the World.*—"It is the fineſt ſight in the world, to behold ten or twelve Aras on a very green tree; never are more charming colours diſplayed." Dutertre. *Hiſt. des Antilles, t. II. p.* 247.

† Briſſon.

alſo

alſo much longer even in proportion to the body; 3. the naked and dirty white ſkin, which covers both ſides of the head, ſurrounds it below, and covers alſo the baſe of the lower mandible. This naked ſkin, in which the eyes are placed, gives them a diſagreeable aſpect. Their voice is harſh; they ſeem to articulate only the ſound *ara*, and with a raucous, thick tone, which is grating to the ear.

The RED ARA.

FIRST SPECIES.

1. *Pſittacus-Macao*, Linn. Gmel. Scop. and Bor.
Ara Braſilienſis, Briſſ. and Gerini.
Pſittacus maximus alter, Ray, Will. and Klein.
The *Red and Blue Maccaw*, Edw. Alb. Banc. and Lath.
2. *Pſittacus-Aracanga*, Gmel.
Araracangua, Ray and Will.
Ara Jamaicenſis, Briſſ.
Pſittacus capite cæruleo, Klein.
The *Red and Yellow Maccaw from Jamaica*, Alb. Baner. and Lath.

ALL the nomenclators have followed Geſner and Aldrovandus in ranging the Red Aras in two ſpecies. But, on the other hand, Marcgrave, and all the travellers, who have had an opportunity of viewing and comparing the birds, conſider them as belonging to the ſame family. They inhabit only the warm climates of America, the Antilles, Mexico, the iſthmus of Panama,

nama, Peru, Guiana, Brazil, &c. and are found in no part of the old continent. It is ſtrange, therefore, that ſome authors * have copied Albin in calling them *Macao Parrots*, and have imagined that they came from Japan. Some may have been carried thither from America, but they are undoubtedly not natives of Japan, and it is probable that theſe authors have confounded the great Red Lory of the Eaſt Indies with the Red Ara of the Weſt Indies.

The great Red Ara is near thirty inches in length, but of this the tail occupies almoſt the one half; all the body, except the wings, is vermilion, the four longeſt feathers of the tail are the ſame; the great quills of the wing are Turkey-blue above, and copper-coloured on a black ground beneath; in the middle quills the blue and green are admirably melted into each other; the great coverts are gold-yellow, and terminated with green; the ſhoulders are of the ſame red with the back; the ſuperior and inferior coverts of the tail are blue; four of the lateral quills, on each ſide, are blue above, and the whole under ſurface copper-colour, which is lighter and has more of the metallic gloſs under the four great middle quills: a tuft of ſnuff-coloured velvet feathers projects, like a cuſhion, on the forehead; the throat is brown-red; a white and naked membranous ſkin encircles the eye,

* Albin and Willughby.

covers

covers the cheek, and ſheathes the lower mandible, which is blackiſh, and ſo are the legs. This deſcription was made from a living bird, and one of the largeſt and moſt beautiful.—Travellers remark differences both in regard to colour and ſize, according to the different countries, or even iſlands, from which they are brought *. We have ſeen ſome in which the tail was entirely blue, others in which it was red, and terminated with blue. Their bulk is as various; but the little Red Aras are more rare than the large ones.

In general, the Aras were formerly very common in St. Domingo. I ſee from a letter of the Chevalier Deſhayes that, ſince the French have extended their ſettlements to the ſummits of the mountains, theſe birds are become leſs frequent †. Both the Red and Blue Aras inhabit the ſame climates, and their habits and economy are exactly the ſame; and what we

* "Theſe birds are ſo diſſimilar according to the grounds where they procure their food, that every iſland has its Parrots, its Aras, and its Parroquets, different in ſize of body, in tone of voice, and in the tints of the plumage." Dutertre, *Hiſt. des Antilles.* Paris, 1667, t. II. p. 247.—"The Aras are birds of extreme beauty; they have a long tail, which is compoſed of charming feathers of different colours, according to the iſlands which have given them birth." *Hiſt. Nat. & Morale des Antilles. Rotterdam,* 1658, *p.* 134.

† "In all theſe iſlands (the Antilles) the Aras have become very rare, becauſe the inhabitants kill them for eating. They retire to the leaſt frequented places, and are no more obſerved to approach the plantations." *Obſervations of M. de la Borde, King's phyſician at Cayenne.*

ſhall

ſhall now relate, in regard to the one, will equally apply to the other.

Aras live in the woods that cover the ſwampy grounds, where the palm trees abound, and they feed chiefly on the dates of the palmettoes, of which there are immenſe foreſts in the overflowed ſavannahs. They generally appear in pairs, ſeldom in flocks; ſometimes, however, they aſſemble together, and their united ſcreams are heard at a great diſtance. When any thing ſcares or ſurpriſes them *, they vent the ſame ſcreams, and while on the wing they cry inceſſantly. Of all the Parrots, they fly the beſt; they traverſe the cleared lands, but never alight; they perch on the ſummit of trees, or on the higheſt branch. During the day, they roam to a diſtance not exceeding a league in ſearch of ripe fruits, but always return in the evening to the ſame ſpot. Dutertre † ſays that they are ſometimes compelled by hunger to eat the apples of the manchineel, which is poiſonous to man, and probably to moſt animals; he adds that the fleſh of ſuch birds is unwholeſome, and even envenomed. Yet the Aras are commonly eaten in Guiana, Brazil, &c. without any bad

* "The Indians were in profound ſecurity (at Yubarco, in Darien), when the cries of a ſort of red Parrots of extraordinary ſize, which they call *guacamayas*, gave them notice of the approach of their enemies." *Expedition of Ojeda, &c. Hiſt. Gen. des Voy. t. XII. p.* 156.

† Hiſt. des Antilles, *t. II. p.* 248.

conſequences; whether it be that the manchineel does not grow in thoſe countries, or that the Aras, finding abundance of their proper food, ſhun the food of that poiſonous tree.

It appears that the Parrots of the new world had nearly the ſame diſpoſitions with all thoſe animals which inhabit deſert tracts; they were familiar, unſuſpecting, and fearleſs of the approach of men, who in thoſe regions were feebly armed and few in number, and never could diſplay their dominion *. Peter of Angleria † aſſures us, that, on the diſcovery of America, the Parrots were caught with the nooſe, and almoſt by the hand of the ſportſman; that they were ſeldom ſcared by the noiſe of fire arms, and did not take to flight when they ſaw their companions drop dead; that they preferred the trees planted near houſes to the ſolitude of foreſts; and though the Indians caught them three or four times a year, to ſtrip them of their rich plumage, this violence did not drive them from their favourite haunts ‡. Hence Aldrovandus, who drew his information from the early accounts of America, ſays that theſe birds are naturally attached to man, or, at leaſt, ſhew no

* "The ſmall birds which inhabited the woods of New Zealand were ſo little acquainted with men, that they calmly rooſted on the branches of trees next us, even on the end of our muſkets. We were new objects to them, which they regarded with a curioſity equal to our own." *Forſter's Relation of Captain Cook's ſecond Voyage.*

† *Lib. X. dec. 3.*

‡ Lery, *p.* 174.

ſymptoms

ſymptoms of fear in his preſence; that they follow the Indians into their huts, and ſeem to contract an affection to the ſpots inhabited by theſe peaceful men. A part of this confidence and ſecurity adheres to the Parrots which have retired to the foreſts. M. de la Borde informs us that this is the caſe with thoſe ſettled in Guiana; they allow one to approach very near them without betraying ſuſpicion or fear. And Piſo ſays of the Brazilian birds, what may be applied to all thoſe of the new world, that they are incautious, and eaſily decoyed into every kind of ſnare.

The Aras make their neſts in the holes of old rotten trees, which are very common in their native regions, and more numerous even than the riſing vigorous plants: they enlarge the aperture, when it is too narrow, and line the inſide with feathers. They have two hatches annually, like all the other American Parrots, and each conſiſts of two eggs, which, according to Dutertre, are as large as pigeons' eggs, and ſpotted like thoſe of partridges *. He adds that the young ones have two ſmall worms in their noſtrils, and a third on a ſmall ball which

* "It often happens that an Ara will lay an egg or two in our temperate climates; Aldrovandus cites ſome inſtances. M. le Marquis d'Abzac has informed us that a large Red Ara of his laid three eggs; they had no germ: however, as the bird was ardent and clamorous to cover, a hen's egg was given to her, which ſhe hatched." *Letter of M. le Marquis d'Abzac, dated from the Caſtle of Noyac, near Perigueux, 21 September, 1776.*

gathers above the head; and that theſe little worms die when the birds begin to be fledged*. Such worms in the noſtrils are not peculiar to the Aras; the other Parrots, the caſſiques, and many other birds, are ſubject to them when in the neſt: many quadrupeds alſo, the monkeys in particular, have worms in the noſe, and in other parts of the body. Theſe inſects are well known in America, and in the French ſettlements are called *macaques worms*. They creep into the fleſh, and occaſion dangerous abſceſſes both in men and the other animals; horſes ſometimes die of ſuch diſorders, owing to their negligent treatment in thoſe countries, where they are never ſtabled nor dreſſed.

The male and female Aras ſit alternately on their eggs, or cheriſh their young, and both equally carry food; they never deſert the charge as long as their aſſiſtance is needed, and always perch together near the neſt.

The young Aras are eaſily tamed, and, in many parts of America, theſe birds are never taken but in the neſts, becauſe the adults are too difficult to educate. Yet Dutertre relates, that the Carribs had a ſingular way of catching them alive; they obſerved when the Aras were on the ground, eating fallen fruit; they endeavoured to ſurround them, and on a ſudden hallooed, clapt their hands, and made ſo great a

* Hiſt. des Antilles, *t. II. p.* 249.

noiſe, that the birds, in the moment of ſurpriſe, loſt the uſe of their wings, and turned on their back to defend themſelves with their bill and nails; the ſavages then held out a ſtick, on which they clenched, and were immediately tied by a ſmall ſtring. He alſo pretends that they could be tamed, though old, and caught in this violent way. But this account appears rather ſuſpicious; particularly, as all the Aras in fact fly from man, a loud noiſe muſt have a greater effect in driving them away. Wafer ſays that the Indians who inhabit the iſthmus tame the Aras as we do magpies, and allow them to make excurſions into the woods during the day, but that they conſtantly return home in the evening; that they imitate their maſter's voice, and the ſong of a bird called *chicali* *. Fernandez relates that they can be taught to ſpeak; but that their articulation is coarſe and diſagreeable; that when they are kept in the houſe, they rear their young like other domeſtic birds. It is certain, that they never prattle ſo well as the other Parrots; and after they are tamed, they never try to eſcape.

The Indians work the plumage into feſtival caps, and other ornaments; they alſo ſtick ſome of the rich feathers into the cheek, and through the noſtrils, or the ears. The fleſh of the Aras, though commonly hard and black, is not un-

* Wafer, in Dampier's Voyage.

pleaſant food, and makes excellent ſoup; and, in general, the Parrots are uſually eaten as the moſt plentiful game in the ſettlement at Cayenne.

The Ara is, more than any bird perhaps, ſubject to the cramp, which is more violent, and more quickly mortal, in the hot countries, than in the temperate climates. I kept one of the largeſt and handſomeſt of the kind, which was given to me by the Marchioneſs of Pompadour in 1751. It was ſeized with an epilepſy two or three times every month, and yet it lived ſeveral years at my ſeat in Burgundy, and might have lived much longer, if it had not been killed. But in South America, theſe birds commonly die of the falling ſickneſs, and this is alſo the fate of all the other Parrots, which are equally ſubject to that diſorder, in the domeſtic ſtate. Perhaps the cauſe which we aſſigned in treating of the canary finches, obtains here, viz. the ſeparation from the female, and the ſuperabundance of nutrition. The Indians, who rear the Aras in their huts with the view to ſell their feathers, have a remedy for the epilepſy; they cut the point of the toe, and the diſcharge of a ſingle drop of blood works an immediate cure. The ſame operation ſucceeds equally in procuring relief to the other diſorders incident to the domeſtic ſtate. I have formerly remarked that the canaries die when the blood does not form a drop at the bill. Nature ſeems to point out the

the ſame remedy which the Indians have diſcovered.

This epilepſy, or cramp, as it is called in the colonies, invariably happens to domeſticated Parrots when they perch on a bit of iron, ſuch as a nail, a curtain rod, &c.; ſo that great care is taken that they alight only on wood. This fact ſeems to ſhew that the fit, which is a violent convulſion of the nerves, is analogous to electricity, whoſe action, it is well known, is more violent when tranſmitted through iron than through wood *.

* This analogy ſeems to be rather fanciful. The effect muſt be referred to the irritability of the muſcular fibres, excited by the ſharpneſs or aſperity of the touching ſubſtance, and by the ſudden cold ſhot through the bird's toes by the contact of metals, which is a rapid conductor of heat. T.

[A] Specific character of the *Pſittacus-Macao*: "It is red; its wing-quills blue above, rufous below; its ſcapular feathers variegated with blue and green; its cheeks naked and wrinkled."—That of *Pſittacus Aracangua*: "It is dilute ſcarlet; its ſcapular feathers yellow, terminated with green; its wing-quills blue above, rufous below; its cheeks naked and wrinkled."

The BLUE ARA.

SECOND SPECIES.

Pſittacus Ararauna, Linn. Gmel. Scop. and Bor.
Pſittacus maximus cyano croceus. Ray, Sloane, and Will.
1. *Ara Jamaicenſis cyano-crocea*, Briſſ.
2. *Ara Braſilienſis cyano-crocea*, Id.
Pſittacus vertice viridi, cauda cyanea, Klein.
The *Blue and Yellow Maccaw*, Edw. Alb. and Lath.

NOMENCLATORS have divided this into two ſpecies; the firſt is *the blue and yellow Ara of Jamaica*, and the ſecond is *the blue and yellow Ara of Braſil*. But theſe birds are not only of the ſame ſpecies, but inhabit the ſame parts of South America.

It is eaſy to deſcribe the Blue Ara: the upper ſide of the body, the wings, and the tail, are entirely azure, and the under ſide of the body is fine yellow *; this yellow is rich and vivid,

* "The other called *Canidé*, having all the plumage under its belly and round its neck as yellow as fine gold; the upper ſide of the back, the wings, and the tail, are of the pureſt blue: you would ſay that it is attired below with a cloth of gold, and mantled above with violet figured damaſk." Lery, *Voyage au Breſil*, 1578, *p.* 171. Thevet characterizes equally well the two ſpecies of Aras: "Nature has delighted to pourtray this beautiful bird, called by the ſavages *carinde*, clothing it with a plumage ſo beautiful and charming, that it is impoſſible not to admire the workmanſhip. This bird exceeds not in bulk the raven, and its plumage, from the belly to the throat, is yellow like fine gold; the wings and the tail, which is very long, are of a fine azure-colour. There is another bird

ROYAL ASIATIC SOCIETY

No. 144

THE BRASILIAN GREEN MACCAW.

vivid, and the blue is gloſſy and ſparkling. The ſavages admire theſe Aras, and celebrate their beauty; the uſual burthen of their ſongs is, *Yellow bird, yellow bird, how charming* *!

The Blue Aras never mingle with the Red Aras, though they frequent the ſame ſpots, and live in harmony. Their voice is ſomewhat different, for the ſavages can diſtinguiſh them by the cry alone. It is ſaid that the blue ones do not pronounce the word ara ſo diſtinctly [A].

The GREEN ARA.

THIRD SPECIES.

Pſittacus Severus, Linn. Gmel. Scop. and Bor.
1. *Ara Braſilienſis Viridis*, Briſſ.
2. *Ara Braſilienſis Erythrochlora*, Id.
Maracana, Ray and Will.
The *Braſilian Green Maccaw*, Edw. Sloane, and Lath.

THE Green Ara is much rarer than the two preceding; it is alſo much ſmaller. It conſiſts of only one ſpecies, though nomencla-

bird reſembling this in ſize, but different in its colours; for its plumage, inſtead of being yellow, is of a red like fine ſcarlet, and the reſt azure." *Singularites de la France Antarctique*, par Thevet, *Paris*, 1558, *p.* 32.

* *Canidé jouve, canidé jouve, heura oncèbe.* Lery, *p.* 173.

[A] Specific character of the *Pſittacus Ararauna*: "Above it is blue, below yellow; its cheeks naked, with feathery lines."

tors

tors have divided it into two; becauſe they confound it with the Green Parrakeet, which they call the *Ara Parrakeet*, on account of the length of its tail, and its diſtinctly articulating the word ara: but notwithſtanding theſe properties it is ſtill a Parrakeet, and very common in Cayenne; whereas the Green Ara is there altogether unknown. Sloane ſays that the Little Maccaw, or Little Green Ara, is very frequent in the woods of Jamaica. But Edwards properly obſerves that this is certainly a miſtake, becauſe, though he made ſeveral applications, he could procure none from his correſpondents in that iſland. Perhaps Sloane confounded the long-tailed Green Parrakeet with the Green Ara.

We had a Green Ara alive: it was preſented by M. Sonini of Manoncour, who procured it at Cayenne from the ſavages of Oyapoc, where it was caught in the neſt. Its length, from the tip of the bill to the end of the tail, is about ſixteen inches; its body, both above and below, is green, which according to the poſition is golden and ſparkling or deep olive; the great and ſmall quills of the wing are beryl blue, on a brown ground, and the under ſide copper coloured; the under ſide of the tail is the ſame, and the upper ſide painted with beryl blue, melting into olive green; the green on the head is brighter and leſs mixed with olive than that on the reſt of the body; at the baſe of the upper mandible, on the face, there is a black border of ſmall

linear

linear feathers that reſemble briſtles; the white naked ſkin that ſurrounds the eyes is ſprinkled with ſmall pencils of the ſame black briſtles ranged in rows; the iris of the eye is yellowiſh.

This bird is as beautiful as it is rare; and it is ſtill more amiable for its ſocial temper and gentle diſpoſition. It ſoon grows familiar with perſons whom it ſees frequently, and is pleaſed to receive and repay their careſſes. But it has an averſion to ſtrangers, and particularly to children, and flies at them furiouſly. Like all other domeſticated Parrots, it clings to the finger when preſented to it; it alſo claſps wood: but in winter, and even in ſummer, when the weather is cool and rainy, it prefers the arm or the ſhoulder, eſpecially if the perſon has woollen clothes, for in general it likes warm ſtuffs. It is alſo fond of kitchen ſtoves when they are cooled ſo much as to retain only a gentle warmth. For the ſame reaſon, it avoids ſitting on hard bodies which quickly communicate cold, ſuch as iron, marble, glaſs, &c.; and in cold rainy weather, though in ſummer, it ſhudders and trembles if water be thrown upon it. However, in ſultry days, it bathes of its own accord, and often dips its head in the water.

If one ſtroke it gently, it ſpreads its wings, and ſquats; it then utters its diſagreeable cry, which reſembles the chatter of the jay, raiſing its wings during the action, and briſtling its feathers:

feathers: and this habitual cry ſeems to expreſs either pleaſure, or languor. Sometimes it has a ſhort ſhrill cry, which is leſs equivocal than the former, and denotes joy and ſatisfaction; for it is generally addreſſed to perſons whom it loves; but this cry alſo marks its impatience, fits, and its pettiſh guſts of ill-humour. But it is impoſſible to be preciſe on this ſubject; for birds organized like the Parrots perpetually vary or modify their voice, as they are prompted by imitation.

The Green Ara is jealous: it is fired at ſeeing a young child ſharing in its miſtreſs's careſſes and favours; it tries to dart at the infant, but, as its flight is ſhort and laborious, it only ſhews its diſpleaſure by geſtures and reſtleſs movements, and continues tormented by theſe fits till its miſtreſs is pleaſed to leave the child, and take the bird on her finger. It is then overjoyed, murmurs ſatisfaction, and ſometimes makes a noiſe exactly like the laugh of an old perſon. Nor can it bear the company of other Parrots, and if one be lodged in the ſame room, it will ſtrive to deprive it of every comfort. It would appear, therefore, that the bird can ſuffer no rivals whatever in its miſtreſs's favour, and that its jealouſy is founded on attachment; accordingly it takes no notice when it ſees a different perſon fondle a child.

It eats nearly the ſame things that we do. It is particularly fond of bread, beef, fried fiſh, paſtry,

paſtry, and ſugar; but it ſeems to prefer roaſted apples, which it ſwallows greedily. It cracks nuts with its bill, and picks them dexterouſly with its claws. It does not chew the ſoft fruits, but ſucks them, by preſſing its tongue againſt the upper mandible; and, with reſpect to the harder ſort of foods, ſuch as bread, paſtry, &c. it bruiſes or chews them, by preſſing the tip of the lower mandible upon the moſt hollow part of the upper. But, whatever be the nature of its food, its excrements are always green, and mixed with a ſort of white chalky ſubſtance, as in moſt other birds, except when it is ſick, and then they aſſume an orange or deep yellow caſt.

Like all the other Parrots, the Blue Ara uſes its claws with great dexterity; it bends forward the hind toe to lay hold of the fruits and other crumbs which are given to it, and to carry them to its bill. The Parrots, therefore, employ their toes nearly as the ſquirrels or monkeys; they alſo cling and hang by them. The Green Ara almoſt always ſleeps in this way, hooked to the wires of its cage. There is alſo another habit common to the Parrots, viz. they never climb or creep without faſtening by the bill, with which they begin, and uſe the feet only as a ſecond point of their motion.

The noſtrils are not viſible in this Ara, as in moſt of the other Parrots; inſtead of being placed in the uncovered part of the horn of the bill,

bill; they are concealed in the firſt ſmall feathers that cover the baſe of the upper mandible, which riſes and forms a cavity at its root when the bird makes an effort to imitate difficult ſounds: in ſuch caſes the tongue folds back at the tip, and recovers its ſhape when it eats; a power not commonly poſſeſſed by birds which can only move it backwards or forwards in the direction of the bill. This little Green Ara is as hardy as moſt of the other Parrots, or even more ſo. It learns more eaſily to prattle, and pronounces much more diſtinctly, than the Red or Blue Aras. It liſtens to the other Parrots, and improves beſide them. Its cry is like that of the other Aras, only its voice is not near ſo ſtrong, and does not articulate ſo diſtinctly the ſound *ara*.

It is ſaid that bitter almonds will kill Parrots, but I am not certain of the fact; I know, however, that parſley, of which they are very fond, if taken even in ſmall quantity, is very pernicious; as ſoon as they eat it, a thick viſcous liquor runs from the bill, and they die in an hour or two.

It appears that there is the ſame variety in the Green Aras as in the Red; at leaſt Edwards has deſcribed a *great Green Maccaw*, which is thirteen inches long, and fifteen to the middle feather of the tail; the face was red; the quills of the wing blue, and alſo the lower part of the back and the rump. Edwards calls the colour

of the under ſurface of the wings and of the tail, *dull orange*, and it is probably the ſame with that dull bronze red which we perceived below the wings of our Green Ara; the feathers of the tail, in that of Edwards, were red above, and terminated by blue [A].

The BLACK ARA.

FOURTH SPECIES.

Pſittacus Ater, Gmel.
The *Black Maccaw*, Lath.

THE plumage is black, with reflections of ſhining green, and theſe mingled colours are much like thoſe of the ani. We can only indicate this ſpecies, which is known to the ſavages of Guiana, but which we have not been able to procure. It differs from the other Aras in ſome of its habits; it never approaches the ſettlements, but remains on the arid and barren ſummits of rocks and mountains. Laet ſeems to mention this bird by the name of *Ararauna*, or *Machao*, whoſe plumage, he ſays, is black, but ſo well mixed with green that, in the ſun beams, it ſhines admirably; the legs are yel-

[A] Specific character of the *Pſittacus Severus*: "It is green; its cheeks naked; the quills of its wings and tail blue, below purpliſh."

low,

low, he ſubjoins; the bill and the eyes reddiſh, and it reſides in the interior parts of the country.

Briſſon has formed another Ara from a Parrakeet, and called it the *variegated Ara of the Molucca's*. But, as we have frequently obſerved, there are no Aras in India, and we have ſpoken of this bird in treating of the Parrakeets of the old continent.

[A] Specific character of the *Pſittacus Ater*: "It is black, with a greeniſh ſplendour; its bill and eyes are reddiſh; its legs yellow."

THE
AMAZONS and CRICKS.

WE ſhall apply the name of *Amazon Parrots* to all thoſe which are marked with red on the fan of the wing; they have received that appellation in America, becauſe they are brought from the country of the Amazons. We ſhall appropriate the term *Crick* to thoſe which have no red on the fan, but only on the wing: this too is the name given by the ſavages of Guiana to theſe Parrots. They are diſtinguiſhed from Amazons by other properties alſo: 1. the plumage of the Amazons is ſhining, and even dazzling, whereas the green colour of the Cricks is dull and yellowiſh; 2. in the Amazons the head is covered with a fine and very bright yellow, but, in the Cricks, this yellow is dull and intermixed with other colours; 3. the Cricks are rather ſmaller than the Amazons, which are much ſmaller than the Aras; 4, the Amazons are exceedingly beautiful and rare, but the Cricks are the moſt common of the Parrots, and the moſt inferior in point of beauty; they are extenſively ſpread, while the Amazons are hardly ever found, except at Para, and in ſome other countries bordering on the river of Amazons.

But the Cricks, having red on their wings, ought to be joined with the Amazons, of which this red forms the principal character: their natural habits are likewiſe the ſame; they fly in numerous flocks, perch in multitudes on the ſame ſpots, and all ſcream together ſo loud that they may be heard at a great diſtance. They frequent alſo the woods, both thoſe on the mountains and thoſe which grow in the low grounds, and even the ſwamps that abound with palms, elaſtic-gum trees, and bananas, &c. and are fond of the fruit of theſe trees. They eat, therefore, a greater variety of fruits than the Aras, which commonly ſubſiſt on the palmettoes alone; but theſe dates are ſo hard that they can hardly be cut; they are round, and as large as pippins.

Some authors * have ſaid that the fleſh of all the American Parrots contracts the odour and colour of the ſubſtances on which they feed; that it ſmells of garlic, when they eat the fruit of the acajou; that it has the ſcent of muſk and of cloves, when they eat the fruit of the Indian wood: and that it receives a black tinge, when they live upon the fruit of the *genipa*, whoſe juice, though at firſt as limpid as water, becomes as black as ink in the ſpace of a few hours. They ſubjoin that the Parrots become very fat during the maturity of the mangroves,

* Dutertre, *Hiſt. des Antilles*, t. II. p. 251.—Labat, *Nouv. Voy. aux Iles de l'Amerique*, t. II. p. 159.

which

which yield excellent food; and laſtly that the ſeeds of the cotton ſhrub intoxicate them to ſuch a degree, that they may be caught with the hand.

The Amazons, the Cricks, and all the other Parrots of America, conſtruct their neſts in holes formed in decayed trees by the woodpeckers, and only lay two eggs twice a year, which the cock and hen hatch by turns: it is ſaid that they never forſake their neſt, and perſiſt in hatching, though their eggs be handled and deranged. In the love ſeaſon, they aſſemble and breed in the ſame haunt, and ſearch their food in company; when their appetite is ſatisfied they make a continual and noiſy babbling, ſhifting their place inceſſantly, and fluttering from tree to tree, till the darkneſs of night and the fatigue of action invite to repoſe. In the morning they are obſerved on the naked branches, at ſun-riſe, and they remain quiet till the dew is dried from their plumage, and their warmth recovered; then they riſe in a flock, with a noiſe like that of gray crows, but louder. They breed in the rainy ſeaſon *.

The ſavages commonly take the Parrots in the neſt, becauſe they are more eaſily reared and better tamed. But the Caribbs, according to Labat, catch them alſo after they are old: they obſerve the trees on which they perch in

* Note communicated by M. de la Borde, King's Phyſician at Cayenne.

great numbers in the evening, and, after dark, they carry near the ſpot lighted coals, on which they throw gum and green pimento; the birds are ſuddenly involved and ſtifled in thick ſmoke, and fall to the ground; the ſavages then ſeize them, tie their feet, and recover them from the ſuffocation, by throwing water on the head*. They alſo bring down the Parrots without hurting them much, by ſhooting them with blunt arrows†. But the old ones thus caught are difficult to tame. There is only one method of rendering them tractable; it is to blow the ſmoke of tobacco into their bill, which partly intoxicates them, and makes them gentle and pliant. If they grow mutinous again, the doſe is repeated, and thus in the courſe of a few days their diſpoſition is ſoftened. We can hardly form an idea of the envenomed temper of the wild Parrots; they bite cruelly without provocation, and will not quit their hold. The old birds never learn to prattle in perfection. Tobacco ſmoke is alſo uſed to cure them of their noiſy diſagreeable cry.

Some authors‡ alledge that the female Parrakeets never learn to ſpeak; but this is a miſtake: they are more eaſily taught than the males, and even more docile and gentle. Of

* Labat, *Nouv. Voy. aux Iles de l'Amerique*, t. II. 52.

† "The ſavages of Braſil have very long arrows, headed with a ball of cotton, for ſhooting at Parrots." *Belon.*

‡ Friſch, &c.

all

all the American Parrots, the Amazons and the Cricks are the moſt ſuſceptible of education, eſpecially when caught young.

As the ſavages traffic with each other in the feathers of Parrots, they claim a certain number of trees on which theſe birds make their neſts. This is a kind of property from which they derive an income by ſelling the Parrots to ſtrangers, or by bartering the feathers with other ſavages. Theſe trees deſcend from father to ſon, and are often their richeſt inheritance *.

* Fernandez, *Hiſt. Nov. Hiſp. p.* 38.

The AMAZON PARROTS.

WE know five ſpecies of theſe, beſides many varieties; the firſt is the Yellow-headed; the ſecond, the Tarabé, or Red-headed; the third, the White-headed; the fourth, the Yellow Amazon; and the fifth, the Aourou-Couraou.

The YELLOW-HEADED AMAZON, *Buff.*

FIRST SPECIES.

Pſittacus Nobilis, Linn. and Gmel.
The *Noble Parrot*, Lath.

THE crown of the head is a fine bright yellow; the throat, the neck, the upper ſide of the back, and the ſuperior coverts of the wings, of a brilliant green; the breaſt and the belly green, with a little yellowiſh; the fans of the wings are of a bright red; the quills of the wings are variegated with green, black, violet-blue, and red; the two exterior quills, on each ſide of the tail, have their inner webs red at their origin, and then deep green, which, at the extremity, changes into a yellowiſh green; the bill is red at the baſe, all the reſt of it cinereous;

nèrcous; the iris is yellow; the feet gray, and the nails black.

We muſt obſerve that Linnæus commits an error in ſaying that this bird has naked cheeks; which confounds the Amazons with the Aras, to which alone that character belongs. On the contrary, the Amazons are feathered on the cheeks, or between the bill and the eyes, and like all the other Parrots, have only a very ſmall circle of naked ſkin round the eyes [A].

VARIETIES or CONTIGUOUS SPECIES of the YELLOW-HEADED AMAZON.

THERE are two other ſpecies, or perhaps varieties, related to the preceding.

I. *The Red and Green Parrot of Cayenne*, which has not been mentioned by any naturaliſt, though known in Guiana by the name of *Baſtard Amazon* or *Half-Amazon*. It is ſaid to be a croſs-breed of the Amazon with another Parrot. It is indeed inferior in beauty to the one juſt deſcribed; for it has not the fine yellow on the face near the root of the bill; the green colour of its plumage is not ſo brilliant, but has a yellowiſh caſt; the red on the plumage is the only colour which is ſimilar and diſpoſed in the

[A] Specific character of the *Pſittacus Nobilis*: "It is green; its cheeks naked; its ſhoulders ſcarlet."

ſame way; there is alſo a ſhade of yellowiſh under the tail; the bill is reddiſh, and the feet gray; and as it has the ſame bulk, we can hardly doubt but that it is nearly related to the ſpecies of the Amazon.

II. The ſecond variety was firſt noticed by Aldrovandus, and, according to his deſcription, it appears to differ from this Amazon Parrot only in the colours of its bill, which that author ſays is ochrey on the ſides of the upper mandible, whoſe ridge is bluiſh, with a ſmall white bar near the tip; the lower mandible is alſo yellowiſh in the middle, and lead colour through the reſt of its length. But all the colours of the plumage, the ſize, and ſhape of the body, being the ſame as in the Yellow-headed Amazon, it may be only a variety.

The TARABE, or RED-HEADED AMAZON.

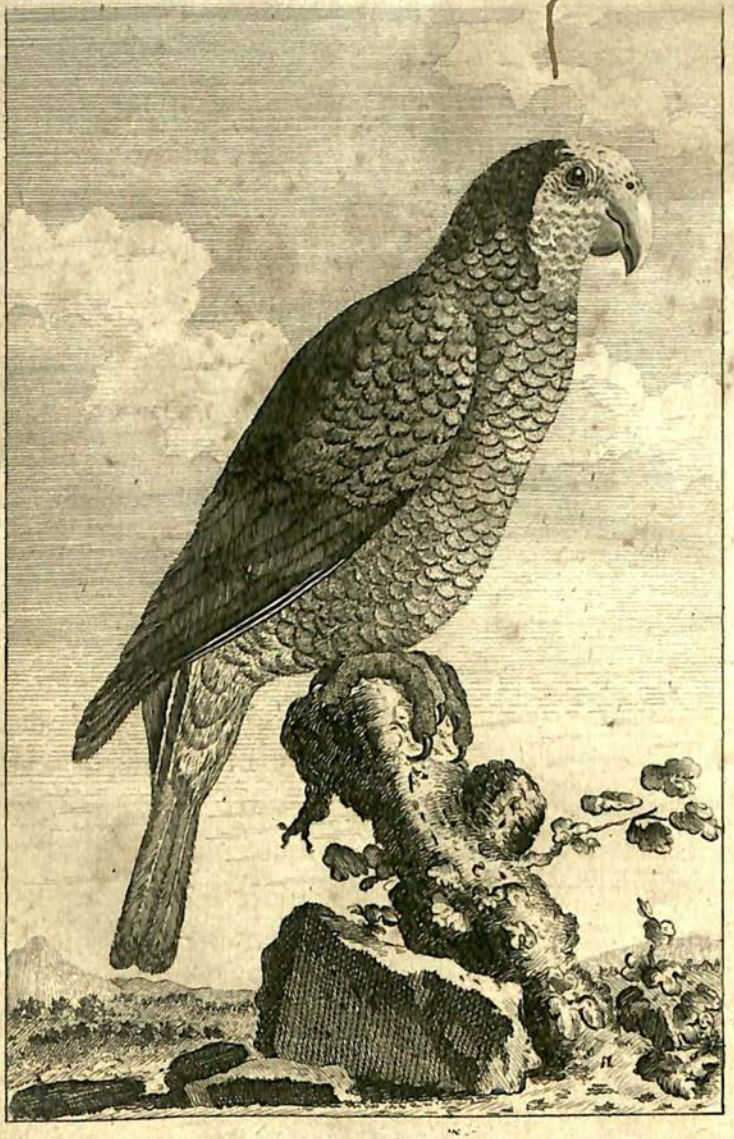
SECOND SPECIES.

Pſittacus Taraba, Gmel.
The *Red-headed Amazon's Parrot*, Lath.

THIS Parrot, which is deſcribed by Marcgrave as a native of Braſil, is not found in Peru. The head, the breaſt, the pinions, and tops of the wings, are red; and hence it ought

ASIATIC

N.º 145



THE WHITE-FRONTED PARROT

ought to be ranged with the Amazon Parrots. All the reſt of its plumage is green; the bill and the feet are dull aſh-colour [A].

The WHITE-HEADED AMAZON.

THIRD SPECIES.

Pſittacus Leucocephalus, Linn. Gmel. and Bor.
The *White-headed Parrot*, Edw.
The *White-fronted Parrot*, Lath.

It would be more accurate to name this bird the *White-fronted Parrot*; becauſe the white is generally confined to the face. But ſometimes it ſurrounds the eye, and extends to the crown of the head; and often it only borders the face. The ſpecies appears ſubject, therefore, to variety. In one ſpecimen, the plumage was alſo of a deeper green, and leſs waved with black: in another, it was lighter, mixed with yellowiſh, and interſected with black feſtoons all over the body; the throat and the fore-ſide of the neck are of a fine red. That colour is not ſo much ſpread in the former, or ſo bright, but there is a ſpot of it under the belly. In both of them, the quills of the wing are blue; thoſe of the tail yellowiſh green, tinged with

[A] Specific character of the *Pſittacus Taraba:* "It is green; its head, its throat, and the leſſer coverts of its wings, are red."

red

red in the firſt half; and, on the fan, a red ſpot is perceived, which is the livery of the Amazons. Sloane ſays that theſe Parrots are frequently brought from Cuba to Jamaica, and that they occur alſo in St. Domingo. They are found in Mexico, but never in Guiana. Briſſon divides them into two ſpecies; and this miſtake was occaſioned by Edwards's White-headed Parrot being different from his. The Martinico Parrot mentioned by Labat, in which the upper ſide of the head is ſlate colour, with a little red, is different from our White-headed Parrot, though Briſſon aſſerts that they are the ſame [A].

The YELLOW AMAZON.

FOURTH SPECIES.

Pſittacus Aurora, Gmel.
The *Aurora Parrot*, Lath.

THIS bird is probably a native of Brazil, ſince Salerne ſays that he ſaw one which pronounced Portugueſe words. We are certain at leaſt that it comes from the new world, and the red colour of its vents aſſigns its place among the Amazons.

All the body and the head are of a very fine

[A] Specific character of the *Pſittacus Leucocephalus*: "It is green; its wing-quills blue; its front white; its orbits ſnowy."

yellow;

ASIATIC SOCIETY

THE YELLOW-HEADED AMAZON PARROT.

yellow; the fans are marked with red, and alſo the great quills of the wings, and the lateral quills of the tail; the iris is red; the bill and feet are white [A].

The AOUROU-COURAOU.

FIFTH SPECIES.

Pſittacus Æſtivus.
Aiuru-curau, Ray and Johnſtone.
The *Common Amazon's Parrot*, Lath.

THE Aourou-Couraou of Marcgrave is a handſome bird, and is found in Guiana and Brazil. Its face is bluiſh, with a bar of the ſame colour below the eyes; the reſt of the head is yellow; the feathers of the throat are yellow, and edged with bluiſh green; the reſt of the body is light green, which aſſumes a yellowiſh tinge on the back and belly; the fan of the wing is red; the ſuperior coverts of the wings green; the quills of the wing are variegated with green, black, yellow, blue, and red; the tail is green, but, when the feathers are ſpread, they appear fringed with black, red, and blue; the iris is gold colour; the bill is blackiſh; and the feet cinereous [B.]

[A] Specific character of the *Pſittacus Aurora:* "It is bright yellow; its *axillæ*, the margins of its wings, and its greater wing-quills red outwards in the middle."

[B] Specific character of the *Pſittacus Æſtivus:* "It is green, ſomewhat ſpotted with yellow; its front blue; its ſhoulders blood-coloured; its orbits carnation."

VARIETIES of the AOUROU-COURAOU.

THERE are ſeveral varieties which may be referred to this ſpecies.

I. The bird mentioned by Aldrovandus under the appellation of *Pſittacus Viridis Melanorinchos*, which hardly differs at all from the preceding.

II. There is another alſo deſcribed by Aldrovandus, in which the face is beryl blue with a bar of the ſame colour above the eyes, which is only a ſhade different from the ſpecies of this article. The crown of the head is alſo of a paler yellow; the upper mandible is red at the baſe, bluiſh in the middle, and black at the end; the lower mandible is whitiſh. In all other properties, the colours are preciſely the ſame as in the *Aourou-Couraou*. It is found in Guiana, Brazil, and Mexico, and alſo in Jamaica; and it muſt be very common in Mexico, ſince the Spaniards give it a proper name, *Catherina* *. From Guiana it has probably been carried into Jamaica, which is at too great diſtance from the continent to correſpond with the excurſions of the Parrots. Labat ſays that they cannot fly from one iſland to another, and that

* Many beautiful kinds of Parrots are diſtinguiſhed in New Spain; the *caterinillas* have their plumage entirely green; the *loros* have it green likewiſe, except the head and the extremity of the wings, which are of a fine yellow; the *pericos* are of the ſame colour, and are not larger than a thruſh." *Hiſt. Gen. des Voy. t. XII. p.* 626.

thoſe

thoſe of the different iſlands may be diſtinguiſhed. The Parrots of Brazil, Cayenne, and the reſt of the continent of America, which are ſeen in the iſlands, have been tranſported thither, and few which are natives of the iſlands are found on the continent, on account of the difficulty of the paſſage; for a ſtrong current ſets out from the Bay of Mexico, ſo that a veſſel is carried in ſix or ſeven days from the continent to the iſlands, though it takes ſix weeks or two months to work back again.

III. Another variety is the *Aiuru-Curuca* of Marcgrave. There is on the head a blue cap mixed with a little black, in the midſt of which is a yellow ſpot: this indication differs in nothing from the deſcription which we have given. But the bill is aſh-coloured at the baſe, and black at the end; this is the only ſlight variation.

IV. Marcgrave notices another variety, and remarks that it is like the preceding; yet our nomenclators have ranged them in different ſpecies, and even doubled theſe. The only difference is that the yellow extends a little more on the neck.

V. *The Yellow-fronted Amazon Parrot* of Briſſon (*Pſittacus Amazonicus fronte lutea*). The only difference is that the face is whitiſh, or pale yellow, but in the other it is bluiſh; which is by no means ſufficient to conſtitute a diſtinct and ſeparate ſpecies.

The CRICKS.

THOUGH there is a very great number of birds to which this name is applied, they may be all reduced to ſeven ſpecies, of which the others are varieties. Theſe ſeven ſpecies are: 1. The Yellow-throated Crick; 2. The Meunier or Mealy Crick; 3. The Red and Blue Crick; 4. The Blue-faced Crick; 5. The Crick properly ſo called; 6. The Blue-headed Crick; 7. The Violet-headed Crick.

The CRICK with a YELLOW HEAD and THROAT.

FIRST SPECIES.

Pſittacus Ochrapterus, Gmel.
Pſittacus Amazonicus gutture luteo, Briſſ.
Pſittacus Viridis Alius, capite luteo, Friſ. and Klein.
The *Yellow-winged Parrot*, Lath.

THE whole of the head, the throat, and the lower part of the neck, are of a very fine yellow; the under ſide of the body is of a ſhining green, and the upper ſide alſo green, but with a little mixture of yellow; the fan of the wing is yellow, whereas the ſame part is red in the Amazons; the firſt row of the coverts

of the wing is red and yellow; the other rows are of a fine green; the quills of the wings and of the tail are variegated with green, black, violet, yellowiſh, and red; the iris is yellow; the bill and feet whitiſh.

This bird is living at preſent with Father Bougot, who has communicated to us the following account of its diſpoſition and habits. "It is very ſuſceptible of attachment to its maſter; it is fond of him, but requires frequent careſſes, and ſeems diſconſolate if neglected, and vindictive if provoked. It has fits of obſtinacy; it bites during its ill humour, and immediately laughs, exulting in its miſchief. Correction and rigorous treatment only harden it, and make it more ſtubborn and wayward; gentle uſage alone ſucceeds in mollifying its temper.

"The inclination to gnaw whatever it can reach, is very deſtructive in its effects; it cuts the cloth of the furniture, ſplits the wood of the chairs, and tears paper, pens, &c. And if it be removed from the ſpot, its proneneſs to contradiction will inſtantly hurry it back. But this miſchievous bent is counterbalanced by agreeable qualities, for it remembers eaſily what it is taught to ſay. Before articulating it claps its wings and plays on its rooſt; in the cage it grows dejected, and continues ſilent; never prattles well, except when it enjoys liberty. It chatters leſs in winter than during the ſummer months,

months, forgetting its food, when it never ceaſes from morning to night.

"In its cheerful days it is affectionate, receives and returns careſſes, and liſtens and obeys; though a peeviſh fit often interrupts the harmony. It ſeems affected by the change of weather, and becomes ſilent; the way to reanimate it is to ſing beſide it; it ſtrives by its noiſy ſcreams to ſurpaſs the voice which excites it. It is fond of children; in which reſpect it differs from other Parrots. It contracts a predilection for ſome of them, and ſuffers them to handle and carry it; it careſſes them, and if any perſon then touches them, it bites at him fiercely. If its favourite children leave it, it is unhappy, follows them, and calls loudly after them. During moulting it is much reduced, and ſeems to endure great pain; and that ſtate laſts near three months.

"Its ordinary food is hemp-ſeed, nuts, fruits of all kinds, and bread ſoaked in wine; it would prefer fleſh, but that diet makes it low ſpirited and inactive, and, after ſome time, occaſions its feathers to drop. It is alſo obſerved to keep its food in bags under the chin, and to ruminate*."

* Note communicated by the Rev. Father Bougot, Guardian of the Capuchins of Semur, who has long amuſed himſelf with rearing Parrots.

[A] Specific character of the *Pſittacus Ochropterus:* "It is green; its front and orbits whitiſh; its top, its cheeks, its throat, and the more remote coverts of its wings, fine yellow."

The MEALY CRICK.

Le Meunier, ou Le Crik Poudré, Buff.

SECOND SPECIES.

Pſittacus Pulverulentus. Gmel.
The *Mealy Green Parrot,* Lath.

No naturaliſt has deſcribed this ſpecies diſtinctly; only Barrère ſeems to mention it as large, whitiſh, and powdered with gray. It is the biggeſt of all the Parrots of the new world, except the Aras. It is called *meunier*, or the *miller*, by the ſettlers at Cayenne, becauſe its plumage, whoſe ground colour is green, appears ſprinkled with meal: there is a yellow ſpot on the head; the feathers on the upper ſurface of the neck have a broad edging of brown; the under ſide of the body is of a lighter green than the upper ſide, and is not mealy; the outer quills of the wings are black, except a part of the outer webs, which are blue; there is a large red ſpot on the wings; the quills of the tail are of the ſame colour with the under ſide of the body, from their origin to three fourths of their length, and the remaining fourth yellowiſh green.

This Parrot is one of the moſt eſteemed, as well for its magnitude and the ſingularity of its colours, as for the facility with which it learns to ſpeak, and the mildneſs of its diſpoſition.

There is only one ſlight defect in its appearance, viz. its bill is like whitiſh horn [A].

The RED and BLUE CRICK.

THIRD SPECIES.

Pſittacus Cæruleocephalus, Linn. and Gmel.
Pſittacus Guianenſis cæruleus, Briſſ.
Pſittacus Verſicolor, Ray.
The *Red and Blue Parrot*, Will. and Lath.

THIS Parrot has been mentioned by Aldrovandus, and all the other naturaliſts have copied his account; but they do not agree in their deſcriptions. According to Linnæus, the tail is green; Briſſon repreſents it as roſe-coloured. As neither of them has ſeen it, I ſhall quote Aldrovandus.

"The epithet *variegated* (ποικιλος) ſuits it well, conſidering the diverſity and richneſs of its colours; blue and ſoft red *(roſeus)* predominate; the blue appears on the neck, the breaſt, and the head, whoſe crown is marked with a yellow ſpot; the rump is of the ſame colour; the belly is green; the top of the back light blue; the quills of the wings and of the tail are

[A] Specific character of the *Pſittacus Pulverulentus*: "It is green, and above is ſprinkled with mealy ſpecks; a bright yellow ſpot on its head, and a red one on its wings."

all roſe colour; the coverts of the former are mixed with green, yellow, and roſe colour; thoſe of the tail are green; the bill is blackiſh; the feet are reddiſh gray." Aldrovandus does not inform us from what country this bird is brought; but as there is red on its wings, and a yellow ſpot on the head, we have ranged it with the American Cricks.

We may obſerve that Briſſon has confounded with it the Violet Parrot mentioned by Barrère, but which is very different, and belongs neither to the Amazons nor to the Cricks [A.]

The BLUE-FACED CRICK.

FOURTH SPECIES.

Pſittacus Havanenſis, Gmel.
Pſittacus Amazonicus gutture cæruleo, Briſſ.
The *Blue-fronted Parrot*, Lath.

THIS Parrot was ſent to us from the Havanna, and it is probably common in Mexico and near the iſthmus of Panama; but it is not found in Guiana. It is much ſmaller than the Mealy Crick, its length being only twelve inches. Among the quills of the wings, which

[A] Specific character of the *Pſittacus Cæruleocephalus*: "It is blue; its belly, its rump, and its tail, are green; its top bright yellow; the quills of its wings and tail red."

are indigo colour, there are ſome red ones; the face is blue; the breaſt and ſtomach are of a ſoft red or lilac, and waved with green; all the reſt of the plumage is green, except a yellow ſpot on the lower part of the belly [A].

The CRICK.

FIFTH SPECIES.

Pſittacus Agilis, Linn. Gmel. and Bor.
Pſittacus Cayanenſis, Briſſ.
The *Little Green Parrot*, Edw.
The *Agile Parrot*, Lath.

THE name *Crick* is beſtowed on this bird at Cayenne, where it is ſo common that the ſame appellation is extended to a conſiderable tribe of Parrots. It is ſmaller than the Amazons; but we ought not, with the nomenclators, to range it among the Parrakeets *: they have miſtaken it for the Guadeloupe Parrakeet, becauſe it is entirely green. They would have avoided this error, if they had conſulted Marcgrave, who ſays expreſsly that it is large as a hen; and this character is alone ſufficient to exclude it from the Parrakeets.

This Crick has alſo been confounded with

[A] Specific character of the *Pſittacus Havanenſis*: "It is green; its front and throat aſh-blue; a large red ſpot on its breaſt; its orbits cinereous."

* Willughby, Ray, Linnæus, and Briſſon.

the

the *Tahua*, or *Tavoua**, which is widely different; for the Tavoua has no red on its wings, and is therefore neither an Amazon nor a Crick, but rather a Popinjay, of which we ſhall ſpeak in the following article.

The Crick is near a foot long from the tip of the bill to the extremity of the tail, and its wings, when cloſed, extend a little beyond the middle of the tail; both the upper and under ſurface are of a pretty light handſome green, particularly on the belly and the neck, where the green is very brilliant; the front and the crown of the head are alſo of a pleaſant green; the cheeks are greeniſh-yellow; there is a red ſpot on the wings, and their quills are black, terminated with blue; the two middle quills of the tail are of the ſame green with the back, and the outer quills, being five on either ſide, have each an oblong red ſpot on the inner webs, and which ſpread more and more from the inner quill to the outer one; the iris is red; the bill and feet whitiſh.

Marcgrave notices a variety in this ſpecies, which differs only in point of ſize, being rather ſmaller than the preceding. The former he calls *Aiuru-catinga*, and the latter *Aiuru-apara*.

* Barrere and Briſſon.

[A] Specific character of the *Pſittacus Agilis*: "It is green; the coverts of its bluiſh primary wing-quills are fulvous; its tail ſcarcely elongated, red below; its orbits cinereous."

The BLUE-HEADED CRICK.

SIXTH SPECIES.

Pſittacus Autumnalis, 1ſt Var. Gmel.
The *Blue-headed Creature*, Bancr.
The *Blue-faced Green Parrot*, Edw. and Lath.

THIS is deſcribed by Edwards; it is found alſo in Guiana. All the fore-ſide of the head and the throat are blue, which colour is terminated, on the breaſt, by a red ſpot; the reſt of the body is green, which is deeper on the back than beneath; the ſuperior coverts of the wings are green; their great quills blue, thoſe adjacent red, and the upper part blue at the extremity; the quills near the body are green; the quills of the tail are green on their upper ſurface as far as the middle, and yellowiſh green below; the lateral quills are red on their exterior webs; the iris is orange coloured; the bill is blackiſh cinereous, with a reddiſh ſpot on the ſides of the upper mandible; the feet are fleſh coloured, and the nails black.

VARIETIES of the BLUE-HEADED CRICK.

To this ſixth ſpecies we ſhall refer the following varieties.

I. The

I. The *Cocho Parrot*, mentioned by Fernandez, which differs in ſo far only as it is variegated with red and whitiſh inſtead of red and bluiſh; in every other reſpect it is the ſame with the Blue-headed Crick. The Spaniards call it *Catherina*, which name they apply alſo to the ſecond variety of the *Aouarou-couraou*, and Fernandez ſays that it prattles well.

II. The *Leſſer Green Parrot* of Edwards, which is diſtinguiſhed only by its red face and orange cheeks; its other colours, and its ſize, are the ſame with thoſe of the Blue-headed Crick.

III. The *Braſilian Green Parrot* of Edwards is alſo another variety. Its face, and the top of its neck, are of a fine red, whereas theſe parts are bluiſh in the Blue-headed Crick; but, in other reſpects, the reſemblance is exact.—We cannot conceive why Briſſon ranges this bird with the Dominica Parrot, mentioned by Labat; for that author ſays only that there are a few red feathers in the wings, in the tail, and under the throat, and that all the reſt of its plumage is green. But theſe characters are too general, and will apply equally to many other Amazons and Cricks.

The VIOLET-HEADED CRICK.

SEVENTH SPECIES.

Pſittacus Violaceus, Linn. and Gmel.
Pſittacus Aquarum-Lupiarum Inſulæ, Briſſ.
The *Ruff necked Parrot*, Lath.

THIS Parrot is found in Guadaloupe, and was firſt deſcribed by Father Dutertre. "Its colours are ſo beautiful," he ſays, "and ſo ſingular, that it deſerves to be ſelected from all the reſt for deſcription. It is almoſt as large as a hen; its bill and eyes are edged with carnation; all the feathers of its head, of its neck, and of its belly, are violet, mixed with a tincture of green and black, changing like the neck of a pigeon; all the upper ſide of the back is of a very brown green; the great quills of the wings are black, all the others yellow, green, and red; on the coverts of the wings are two roſe-ſhaped ſpots of the ſame colours. When it briſtles the feathers of its neck, it makes a fine ruff round the head, on which it ſeems to pride itſelf, as the peacock does on its tail; it has a ſtrong voice, ſpeaks very diſtinctly, and is eaſily taught, if taken young *."

We have not ſeen this Parrot; it is not found at Cayenne, and it muſt now be very rare in Guadeloupe, ſince none of the inhabitants of

* *Hiſt. des Antilles*, t. II. p. 251;

this

this iſland could give us any account of it. But this is not extraordinary; for as the iſlands advance in population, the number of Parrots gradually decreaſes, and Dutertre remarks in particular, that the French coloniſts commit great havock among the Violet-headed Cricks in the ſeaſon of the maturity of the guavas, cachimans, &c. when their fleſh is exceſſively fat and juicy. He adds that they are of a gentle diſpoſition, and eaſily tamed: "We have two," ſays he, "which build their neſt in a large tree a hundred paces from our hut; the male and female ſit alternately, and come one after another to the hut for food, and bring their young ones with them as ſoon as theſe can leave the neſt."

We may obſerve that, as the Cricks are the moſt common kind of Parrots, and at the ſame time ſpeak the beſt, the ſavages have amuſed themſelves in rearing theſe, and in trying to vary their plumage. For that operation they uſe the blood of a ſmall frog, which is very different from thoſe of Europe; it is only half the ſize, and of a fine azure colour, with longitudinal bars of gold: it is the handſomeſt of all the frogs, and ſeldom frequents marſhes, but inhabits the ſequeſtered foreſts. The ſavages take a young Crick from the neſt, and pluck the ſcapular feathers and ſome of thoſe on the back; then they rub it with the frog's blood, and the new feathers which grow are no longer green, but fine yellow or beautiful red. Theſe

birds

birds thus altered are called *Tapired Parrots* in France. The operation muſt have been anciently in uſe among the ſavages, for it is noticed by Marcgrave; thoſe which inhabit Guiana and the banks of the Amazons equally practiſe it *. The plucking of the feathers hurts the birds greatly, and ſo many die of it, that thoſe which ſurvive are very rare, and are ſold much dearer than the other Parrots.

The Parrot mentioned by Klein and Friſch is one of theſe artificial birds; it would therefore be idle to copy their deſcription.

* Voy. de M. de Gennes au detroit de Magellan. *Paris*, 1698, *p.* 163.

[A] Specific character of the *Pſittacus Violaceus*: "It is violet, variegated with green, and a mixture of black; its back partly duſky green; its greater wing-quills black, the reſt variegated with yellow, green, and red; a roſy ſpot on the coverts."

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

N° 147

THE ARTIFICIAL PARROT.

The POPINJAYS.

Les Papegais, Buff.

THESE are in general ſmaller than the Amazons, from which and from the Cricks they are diſtinguiſhed by having no red on the wings. They are all peculiar to the new world. We are acquainted with eleven ſpecies of Popinjays, to which we ſhall ſubjoin ſuch as are ſlightly mentioned by authors without deſcribing the colours of the wings, and of which we cannot therefore decide to what genus they belong.

The PARADISE POPINJAY.

FIRST SPECIES.

Pſittacus-Paradiſi, Linn. Gmel. and Klein.
Pſittacus Luteus inſulæ Cubæ, Briſſ.
The *Cuba Parrot*, Brown and Cateſby.
The *Paradiſe Parrot*, Lath.

THIS Parrot is very handſome. Its body is yellow, and all the feathers edged with dark gloſſy red; the great quills of the wings are white, and all the others yellow, like the feathers on the body; the two quills in the middle of the tail are alſo yellow, and all the lateral ones red, from their origin as far as two thirds

thirds of their length; the reſt is yellow; the iris is red; the bill and feet white.

It would ſeem that this ſpecies admits of ſome variety; for in the ſpecimen deſcribed by Cateſby, the throat and belly were entirely red, though there are others in which theſe parts were yellow, and the feathers only edged with white. Perhaps the breadth of the red borders differs according to age or ſex, which would account for the diverſity.—The bird is found in the iſland of Cuba [A].

The MAILED POPINJAY, *Buff.*

SECOND SPECIES.

Pſittacus Accipitrinus, Var. Gmel.

THIS American Parrot appears to be the ſame with the Variegated Parrot of the old continent, and we preſume that thoſe imported into France had been carried from the Eaſt Indies to America; and if ſome are found in the interior parts of Guiana, they have been naturalized, like the canaries, and ſeveral other birds and quadrupeds, introduced by navigators. No naturaliſt or traveller who has viſited the new

[A] Specific character of the *Pſittacus Paradiſi:* "It is yellow; its throat, its belly, and the baſe of its tail-quills, are red."

world

ROYAL ASIATIC SOCIETY
BOMBAY
BRANCH
OF THE

N°148

THE MAILED PARROT.

world takes notice of it, though it is well known to our bird-fanciers. Its voice is different from that of the other Parrots of America, and its cry is ſharp and ſhrill. All theſe circumſtances conſpire to prove that it is not indigenous in the new world.

The top of the head and the face are ſurrounded with narrow long feathers, white and radiated with blackiſh, and which it briſtles when irritated, and diſpoſes into a fine ruff. The nape and ſides of the neck are of a fine brown red, and edged with lively blue; the feathers on the breaſt and ſtomach are clouded with the ſame colours, only more dilute, and with a mixture of green; a more beautiful ſilky ſhining green covers the upper ſide of the body and of the tail, except that ſome of the lateral feathers on each ſide appear blue exteriorly, and the primaries of the wing are brown, and alſo the under ſurface of thoſe of the tail.

The TAVOUA.

THIRD SPECIES.

Pſittacus Feſtivus, Linn. and Gmel.
The *Feſtive Parrot*, Lath.

THIS is a new ſpecies, of which M. Duval ſent two ſpecimens for the King's Cabinet.

It

It is rare in Guiana; yet it ſometimes approaches the dwellings. Bird-fanciers are eager to obtain it, for of all the Parrots it ſpeaks the beſt, and even excels the Red-tailed Gray Parrot of Guinea; and yet it was not known till lately, which is ſomewhat ſingular. But its talents are attended with an eſſential defect; it is faithleſs and miſchievous, and bites cruelly when it pretends to careſs: it would even ſeem to lay plans of malice, and its phyſiognomy, though ſprightly, is dubious. It is an exceedingly beautiful bird, and more nimble and agile than any other Parrot.

Its back and its rump are of a very beautiful red; it has alſo ſome red on the front, and the upper ſide of its head is light blue; the reſt of the upper ſide of the body is a fine full green, and the under ſide of a lighter green; the quills of the wings are of a fine black, with deep blue reflections; ſo that in ſome poſitions they appear entirely of a very deep blue: the coverts of the wings are variegated with deep blue and green.

We have obſerved that Briſſon and Brown have confounded this Popinjay with our fifth ſpecies of Cricks.

[A] Specific character of the *Pſittacus Feſtivus:* "It is green; its front purpliſh; its eye-brows and throat blue; its back blood-coloured."

THE RED-BANDED POPINJAY, *Buff.*

FOURTH SPECIES.

Pſittacus Dominicenſis, Gmel.
The *Red-banded Parrot*, Lath.

THIS Parrot is found in St. Domingo. On the front a ſmall red band extends between the eyes. This and the blue tinge of the primaries of the wings are almoſt the only interruptions in the colour of the plumage, which is all green and dark complectioned, and ſcaled with blackiſh on the back, and with reddiſh on the ſtomach. It is nine inches and a half long [A].

THE PURPLE BELLIED POPINJAY, *Buff.*

FIFTH SPECIES.

Pſittacus Leucocephalus, Var. 3, Gmel.

THIS Parrot is found in Martinico. It is not ſo beautiful as the preceding ones: the face is white; the crown and ſides of the head blue cinereous; the belly variegated with purple and

[A] Specific character of the *Pſittacus Dominicenſis*: "It is green; a red band on its front; black creſcents on its neck and back; its wing-quills blue."

green,

green, but the purple predominates; all the reſt of the body, both above and below, is green; the fan of the wing white; the quills variegated with green, blue, and black; the two middle quills of the tail are green, the others variegated with green, red, and yellow; the bill is white; the feet are gray, and the nails brown.

The POPINJAY with a BLUE HEAD and THROAT.

SIXTH SPECIES.

Pſittacus Menſtruus, Linn. Gmel. and Scop.
The *Blue-headed Parrot*, Edw. and Lath.

THIS Popinjay is found in Guiana, though rare; and it is beſides little ſought after, for it cannot be taught to ſpeak. The head, neck, throat, and breaſt, are of a fine blue, which receives a tinge of purple on the breaſt; the eyes are ſurrounded by a fleſh-coloured membrane, whereas in all the other Parrots this membrane is white; on each ſide of the head is a black ſpot; the back, the belly, and the quills of the wing are of a handſome green; the ſuperior coverts of the wings are yellowiſh green; the lower coverts of the tail are of a fine red; the quills of the middle of the tail are entirely

tirely green; the lateral ones are of the ſame green colour, but they have a blue ſpot, which extends the more the nearer the quills are to the edges; the bill is black, with a red ſpot on both ſides of the ſuperior mandible; the feet are gray [A].

We have obſerved that Briſſon has confounded this bird with Edwards's *Blue-faced Green Parrot*, which is our *Blue-headed Crick*.

The VIOLET POPINJAY.

SEVENTH SPECIES.

Pſittacus Purpureus, Gmel.
The *Little Duſky Parrot*, Edw. and Lath.

THIS is called, both in America and in France, the *Violet Parrot*. It is common in Guiana; and, though handſome, is not much eſteemed, becauſe it never learns to ſpeak.

We have already remarked that Briſſon confounds this with the Red and Blue Parrot of Aldrovandus, which is a variety of our Crick. The wings and tail are of a fine violet; the head and the borders of the face are of the ſame colour, which is waved on the throat, and melted into the white and lilac; a ſmall red

[A] Specific character of the *Pſittacus Menſtruus*: "It is green; its head bluiſh; its vent black."

ſtreak edges the front; all the upper ſide of the body is brown, obſcurely tinged with violet; the under ſide of the body is richly clouded with blue-violet, and purple-violet; the lower coverts of the tail are roſe colour, which alſo tinges exteriorly the edges of the outer quills of the tail, through their firſt half [A].

The SASSEBE.

EIGHTH SPECIES.

Pſittacus Collarius, Linn. and Gmel.
Pſittacus Jamaicenſis gutture rubro, Briſſ.
Pſittacus Minor collo miniacco, Ray.
The *Common Parrot of Jamaica*, Sloane.
The *Red-throated Parrot*, Lath.

OVIEDO is the firſt who has mentioned this Popinjay under the name of *Xaxebès*, or *Saſſebe*. Sloane make it a native of Jamaica. The head, and both the upper and under ſurface of the body, are green; the throat and the lower part of the neck are of a fine red; the quills of the wings are ſome green and others blackiſh. It is a pity that Oviedo and Sloane, who ſaw this bird, did not deſcribe it more fully [B].

[A] Specific character of the *Pſittacus Purpureus*: "Above it is dark brown, below purple; its top and its cheeks black; its orbits blue; a collar with dirty points; and the quills of its wings and tail blue."

[B] Specific character of the *Pſittacus Collarius*: "It is green, with a reddiſh throat."

The BROWN POPINJAY.

NINTH SPECIES.

Pſittacus Sordidus, Linn. and Gmel.
Pſittacus Novæ Hiſpaniæ, Briſſ.
The *Duſky Parrot*, Edw. and Lath.

THIS bird is deſcribed, figured, and coloured, by Edwards: it is one of the rareſt, and of the leaſt beautiful in the whole genus of Parrots. It is found in New Spain. It is nearly as large as a common pigeon; the cheeks and the upper ſide of the neck are greeniſh; the back is dull brown; the rump is greeniſh; the tail is green above and blue below; the throat is of a beautiful blue, which is about an inch broad; the breaſt, belly, and legs, are brown, with a little cinereous; the wings are green, but the quills next the body are edged with yellow; the under coverts of the tail are of a fine red; the bill is black above, its baſe yellow, and the ſides of the two mandibles are of a fine red; the iris is brown nut colour.

[A] Specific character of the *Pſittacus Sordidus*: "It is brownish; its throat blue; its wings and tail green; its bill and vent red."

THE AURORA-HEADED POPINJAY.

TENTH SPECIES.

Pſittacus Ludovicianus, Gmel.
Pſittacus Viridis, capite luteo, fronte rubra, Fris.
The *Orange-headed Parrot*, Lath.

DUPRATZ is the only perſon who has deſcribed this bird. "It is not," ſays he, "ſo large as the Parrots which are commonly brought into France; its plumage is of a beautiful celadine-green; its head is enveloped in orange, which receives a red tinge near the bill, and melts into the green on the ſide of the body; it learns with difficulty to ſpeak, and when it has made that acquiſition, it ſeldom diſplays it. Theſe Parrots always appear in flocks, and if they are ſilent when tamed, they are very noiſy in the air, and their ſhrill ſcreams are heard at a diſtance. They live on walnuts, the kernels of pine tops, the ſeeds of the tulip tree, and other ſmall ſeeds *.

* Voyage à la Louiſiane, *par le Page Dupratz*, t. II. p. 128.

[A] Specific character of the *Pſittacus Ludovicianus*: "It is ſea-green; its head fulvous, inclining to reddiſh near the bill."

The PARAGUA.

ELEVENTH SPECIES.

Pſittacus Paraguanus, Gmel.
Lorius Braſilienſis, Briſſ.
The *Paraguan Lory*, Lath.

THIS bird, which is deſcribed by Marcgrave, appears to be found in Braſil. It is partly black, and larger than the Amazon; the breaſt, and the upper part of the belly, and alſo the back, are of a very beautiful red; the iris is likewiſe of a fine red; the bill, the legs, and the feet, are deep aſh colour.

The beautiful red colours would indicate a relation to the Lory; but as that bird occurs only in India, while the other is probably indigenous in Braſil, I ſhall not venture to pronounce whether they are of the ſame, or of different ſpecies; eſpecially as Marcgrave, who ſaw the Parrot, only gives it the name *Paragua*, without ſaying that it is a native of Braſil. It is perhaps a Lory, as Briſſon conceives. The conjecture derives force from another circumſtance: Marcgrave ſpeaks alſo of a gray Parrot* as brought from Brazil, which we ſuſpect to be originally from Guinea; becauſe none of theſe

* *Pſittacus Cinereus*, Linn. and Gmel.
Maracana Prima, Marc. Johnſt. Will. and Ray.
Pſittacus Braſilienſis Cinereus, Briſſ.
Specific character: "It is entirely bluiſh aſh-colour."

gray Parrots are found in America, though they are frequent in Guinea, from whence they are often carried with the negroes. Indeed the manner in which Marcgrave expreſſes himſelf ſhews that he did conſider it as an American Parrot; *A Bird evidently like the Parrot* *.

* Avis pſittaco planè ſimilis.

[A] Specific character of the *Pſittacus Paraguanus:* "It is ſcarlet; its head, its neck, its vent, its tail, its ſhoulders, and its wings, black."

The PARROQUETS.

Les Perriches, Buff.

BEFORE we conſider the great tribe of Parroquets, we ſhall ſurvey ſeparately a little genus that appears to belong neither to the Parroquets nor to the Popinjays, and which is intermediate in regard to ſize. It contains only two ſpecies, the *Maipouri* and the *Caica*; which laſt was unknown till very lately.

The MAIPOURI, *Buff.*

FIRST SPECIES.

Pſittacus Melanocephalus, Linn. and Gmel.
Pſittacus Mexicanus pectore albo, Briſſ.
Pſittacus Atricapillus, Miller.
The *White breaſted Parrot*, Edw. and Lath.

THE name is very applicable; for this Parrot whiſtles like the tapir, which is called *maipouri* in Cayenne; and though there is a vaſt difference between that huge quadruped and this little bird, they utter ſounds ſo exactly ſimilar, as not to be diſtinguiſhable. It is found in Guiana, in Mexico, and as far as the Caraccas; it never comes nigh the ſettlements, but commonly lives in woods ſurrounded with wa-

ter, or even among the trees which grow in the deluged ſavannas. It has no other note than the ſharp whiſtle, which it repeats often while on the wing, and it never learns to ſpeak.

Theſe birds commonly aſſociate in ſmall bodies, but often without any tie of affection; for they fight frequently, and with rancourous obſtinacy. When any are caught, they reject every kind of food, ſo that it is impoſſible to keep them alive; and their temper is ſo ſtubborn that it cannot be ſoftened by the ſmoke of tobacco, which calms the moſt froward of the Parrots. The Maipouris require to be bred when young, and they would not repay the trouble of educating them, were not their plumage ſo beautiful, and their figure ſo ſingular: for their ſhape is very different from that of the Parrots, or even of the Parroquets; their body is thicker and ſhorter, their head much larger, their neck and tail extremely ſhort; ſo that they have an heavy unwieldy air. All their motions are ſuitable to their figure; even their feathers are entirely different from thoſe of other Parrots and Parrakeets, being ſhort, cloſe, and cohering to the body; ſo that they ſeem compreſſed and glued artificially on the breaſt and on all the lower parts of the body.—The Maipouri is as large as a ſmall Popinjay, and, for this reaſon perhaps, have Edwards, Briſſon, and Linnæus, claſſed it with the Parrots; but the difference

difference is ſo great as to require a diſtinct genus.

The upper ſide of the head is black; there is a green ſpot below the eyes; the ſides of the head, the throat, and the lower part of the neck, are of a fine yellow; the upper ſide of the neck, the belly, and the legs, are orange; the back, the rump, and the ſuperior coverts of the wings, and the quills of the tail, are of a fine green; the breaſt and belly are whitiſh when the bird is young, and yellowiſh after it is grown up; the great quills of the wings are exteriorly blue on the upper ſide, and blackiſh below; the following ones are green, and edged exteriorly with yellow; the iris is of a deep cheſnut; the bill fleſh coloured; the feet aſh brown, and the nails blackiſh [A].

The CAICA.

SECOND SPECIES.

Pſittacus Pileatus, Gmel.
The *Hooded Parrot*, Lath.

CAICA, in the Galibi language, is the name of the largeſt Parroquet, and hence we have

[A] Specific character of the *Pſittacus Melanocephalus*: "It is green, below yellow; its cap black; its breaſt white; its orbits carnation."

applied

applied it to the preſent bird. It is of the ſame genus with the preceding; for it has all the peculiarities of the form, and alſo the black hood. Its ſpecies is not only new in Europe, but even in Cayenne. M. Sonini de Mononcour tells us, that he ſaw it the firſt in 1773. Prior to that date none ever appeared in Cayenne, and it is ſtill uncertain from what country they come. But they have ſince continued to arrive annually in ſmall flocks, about the months of September and October, and halt only a ſhort time during the fine weather, ſo that they are only birds of paſſage.

The hood which envelopes the Caica is pierced with a hole, in which the eye is placed; the hood extends very low, and ſpreads into two chin pieces of the ſame colour; the circuit of the neck is fulvous and yellowiſh; the beautiful green which covers the reſt of the body is interrupted by an azure tinge, that marks the edges of the wing from the ſhoulder, borders the great quills on a darker ground, and tips thoſe of the tail, except the two middle ones, which are entirely green, and appear rather ſhorter than the lateral ones.

[A] Specific character of the *Pſittacus Pileatus*: "It is green; its head black; its orbits white; a ſky-blue ſpot on its ſhoulders; the tail tipt with blue."

PARROQUETS
OF THE NEW CONTINENT.

THE diſtinction of long and ſhort tailed Parrakeets obtains both in the new and in the old continent. Of the long-tailed ones, ſome have the tail equally tapered, others unequally. We ſhall therefore purſue the former plan; we ſhall begin with ſuch as have long and equal tails, then conſider ſuch as have long but unequal tails, and conclude with the ſhort-tailed ones.

PARROQUETS
WITH LONG AND EQUALLY TAPERED TAILS.

The PAVOUANE PARROQUET.

FIRST SPECIES,
With a long and equal Tail.

Pſittacus Guianenſis, Gmel. and Briſſ.
The *Pavouane Parrot*, Lath.

THIS is one of the handſomeſt of the Parroquets. It is pretty common in Cayenne, and is alſo found in the Antilles, as M. de la Borde aſſures us. It learns more eaſily to ſpeak than any of the Parroquets of the new conti-

nent; but, in other reſpects, it is indocile, for it always retains its wild ſavage character. Its aſpect is angry and turbulent, but as it has a quick eye and a ſlender active ſhape, its figure is pleaſing. Our bird-fanciers have adopted the name *Pavouane*, which it has in Guiana. Theſe Parroquets fly in flocks *, perpetually ſcreaming and ſqualling; and they range through the woods and ſavannas, and prefer the fruit of a large tree, called in that country the *immortal*, and which Tournefort denominates the *corallo dendron*.

It is a foot long; its tail is near ſix inches, and regularly tapered; the upper ſide of the wings and tail of a very fine green. In proportion as the bird grows older, the ſides of the head and neck are covered with ſmall ſpots of a bright red, which become more and more numerous; ſo that, in ſuch as are aged, theſe parts are almoſt entirely covered with beautiful red ſpots. Theſe never begin to appear till the ſecond or third year. The ſmall inferior coverts of the wings are of the ſame bright red, in every period of its age, only the colour is not quite ſo bright when the bird is young. The great inferior wings are of a fine yellow; the quills of the wings and tail are of a dull yellow below; the wing is whitiſh, and the feet are gray.

* "It is remarked that the Parrakeets never aſſociate with the Parrots, but always keep together in great flocks." *Wafer*, in Dampier's Voyage.

The BROWN-THROATED PARROQUET.

SECOND SPECIES,
With a long and equal Tail.

Pſittacus Æruginoſis, Linn. and Gmel.
Pſittaca Martinicana, Briſſ.
The *Brown-throated Parrakeet*, Edw. and Lath.

EDWARDS is the firſt who deſcribed this Parrakeet. It is found in the new world; Briſſon received a ſpecimen from Martinico.

The front, the ſides of the head, the throat, and the lower part of the neck, are of a brown gray; the crown of the head is bluiſh green; all the upper part of the body yellowiſh green; the great ſuperior coverts of the wings blue; all the quills of the wings blackiſh below, but the primaries are blue above, with a broad blackiſh border on the under ſide; the middle ones are of the ſame green with the upper ſide of the body; the tail is green above and yellowiſh below; the iris is cheſnut; the bill and feet aſh coloured [A].

[A] Specific character of the *Pſittacus Æruginoſis*: It is green; its top and its primary wing-quills blue; its orbits cinereous."

The PARROQUET with a VARIEGATED THROAT.

THIRD SPECIES,
With a long and equal Tail.

THIS Parroquet is very rare and handſome; it is not frequently ſeen in Cayenne, nor do we know whether it can be taught to ſpeak. It is not ſo large as a blackbird; the greateſt part of its plumage is of a fine green, but the throat and the fore-ſide of the neck are brown, with ſcales and mails of ruſty gray; the great quills of the wings are tinged with blue; the front is water-green; behind the neck and a little below the back, is a ſmall zone of the ſame colour; on the fold of the wing are ſome feathers of a light vivid red; the tail is partly green above and partly dun-red, with copper reflections, and below it is entirely copper coloured; the ſame tinge appears under the belly.

The PARROQUET with VARIEGATED WINGS.

FOURTH SPECIES,
With a long and equal Tail.

Pſittacus Vireſcens, Gmel.
Pſittaca Cayanenſis, Briſſ.
The *Yellow-winged Parrakeet*, Lath.

THIS ſpecies is called the *Common Parrakeet* in Cayenne. It is not ſo large as a blackbird, being only eight inches and four lines long, including the tail, which is three inches and a half. Theſe Parroquets keep in numerous flocks, prefer the cleared grounds, and even reſort to the ſettled ſpots. They are very fond of the buds of the *immortal* tree, and when in bloſſom they perch on it in crowds. One of theſe large trees planted in the new town of Cayenne draws the viſits of theſe birds; they are frightened away by firing upon them, but they ſoon return. It is difficult to teach them to ſpeak.

In this Parroquet the head, the whole body, the tail, and the ſuperior coverts of the wings, are of a fine green; the quills of the wings are variegated with yellow, bluiſh green, white, and green; the quills of the tail are edged with yellowiſh on the inſide; the bill, the feet, and the nails, are gray.

In

In the female the colours are not ſo bright, which is the only difference.

Barrere confounds this bird with the *Anaca* of Marcgrave; but theſe two birds, though of the ſame genus, are of different ſpecies.

The ANACA.

FIFTH SPECIES,
With a long and equal Tail.

Pſittacus Ana, Gmel.
Pſittacula Broſilienſis Fuſca, Briſſ.
The *Cheſnut Crowned Parrakeet*, Lath.

THE Anaca is a very handſome Parroquet, which is found in Brazil. It is only of the ſize of a lark; the crown of the head is cheſnut; the ſides of the head brown; the throat cinereous; the upper ſide of the neck and the flanks green; the belly is ruſty brown; the back green with a brown ſpot; the tail light brown; the quills of the wings green, terminated with blue, and there is a ſpot or rather a fringe of blood colour on the top of the wings; the bill is brown; the feet cinereous.

Briſſon has ranged this Parrakeet among thoſe which have a ſhort tail, but Marcgrave never mentions that property; and as that author never omits, in his deſcriptions, to note when they

they have a ſhort tail, and yet ranges the preſent between two long-tailed ones, we preſume that belongs to that tribe. We have drawn the ſame inference with regard to the following, which Marcgrave names *Jendaya*, without ſaying that it has a ſhort tail [A].

The JENDAYA.

SIXTH SPECIES,
With a long and equal Tail.

Pſittacus-Jandaya, Linn. and Gmel.
Pſittacula Braſilienſis Lutea, Briſſ.
The *Yellow-headed Parrot*, Lath.

THIS Parroquet is equal in bulk to the blackbird. The back, the wings, the tail, and the rump, are of a bluiſh green, inclining to that of beryl; the head, the neck, and the breaſt, are orange yellow; the extremities of the wings blackiſh; the iris of a fine gold colour; the bill and feet black. It is found in Brazil, but no perſon has ſeen it except Marcgrave, and all the other writers have copied his account [B].

[A] Specific character of the *Pſittacus Anaca:* "It is green, below brown rufous; its top bay; a ſpot on its back, and its tail pale brown; the margin of its wings red."

[B] Specific character of the *Pſittacus Jandaya:* "Above it is green, below bright yellow; its head and neck bright yellow."

The EMERALD PARROQUET.

SEVENTH SPECIES,
With a long and equal Tail.

Pſittacus Smaragdinus, Gmel.
The *Emerald Parrot*, Lath.

THE rich and brilliant green that covers the whole of the body, except the tail, which is cheſnut with a green point, ſeems to entitle this bird to the name of *Emerald Parroquet*. The appellation of *Magellanic Parrakeet*, which is given in the *Planches Enluminées*, ought to be rejected; for no Parrot or Parroquet inhabits ſo high a latitude. It is not likely that theſe would paſs the tropic of Capricorn in queſt of regions which are colder than thoſe at an equal diſtance on the northern hemiſphere. Farther, is it credible that birds which live upon tender and juicy fruits would wing their courſe to frozen tracts, which yield nothing but a few ſtarved berries? Yet ſuch are the lands which border on the Straits of Magellan, where ſome travellers are ſuppoſed to have ſeen Parrots. This aſſertion, which is preſerved in the work of a reſpectable author *, would have appeared extraordinary, had we not found, in tracing it to its ſource, that it reſts on an evidence which de-

* Hiſt. des Navig. aux terres Auſtrales, *t. I. p.* 347.

ſtroys itſelf; it is that of the navigator Spilberg, who places the Parrots in the Straits of Magellan, near the ſame place where, a little before, he fancied that he ſaw Oſtriches *. For a ſimilar reaſon, perhaps, we ought to reject the relation that Parrots are found in New Zealand and in Diemen's Land †, in the 43d degree of ſouth latitude.

We ſhall now proceed to enumerate and deſcribe the Parroquets of the new continent, which have a long tail unequally tapered.

* Hiſt. Gen. des Voy. *t. XI. pp.* 18 & 19.

† Captain Cook's ſecond Voyage.

[A] Specific character of the *Pſittacus Smaragdinus:* " It is brilliant green; the hind part of its belly, its rump, and its tail, ferruginous cheſnut."

PARROQUETS

WITH A LONG TAIL UNEQUALLY TAPERED.

The SINCIALO.

FIRST SPECIES,

With a long and unequal Tail.

Pſittacus Rufiroſtris, Linn. Gmel. and Gerini.
The *Long-tailed Green Parrakeet*, Edw. and Lath.

THIS bird is called *Sincialo* at St. Domingo. It is not larger than a blackbird, but is twice as long, its tail being ſeven inches, and its body five. It is diſpoſed to chatter, and eaſily learns to ſpeak, to whiſtle, and to mimic the cries of all the animals which it hears: theſe Parroquets fly in flocks, and perch on the cloſeſt and moſt verdant trees; and as they are green themſelves, they can hardly be perceived. They make a great noiſe among the trees, many at once ſcreaming, ſqualling, and chattering; and if they overhear the voice of men or other animals, they cry the louder *. This habit is not peculiar to the Sincialos, for almoſt all Parrots that are kept in the houſe babble with more vociferation when a perſon ſpeaks high. They feed like the other Parrots, but are more lively

* Dutertre, *t. II. p.* 252.

and

and cheerful: they are ſoon tamed; they ſeem fond of being taken notice of, and they ſeldom are ſilent, for whenever a perſon talks, they ſcream and chatter likewiſe. They grow fat and delicate to eat, during the maturity of the ſeeds of Indian wood, which principally ſupports them.

The whole plumage of this Parroquet is yellowiſh green; the inferior coverts of its wings and tail are almoſt yellow; the two quills in the middle of the tail are longer, by an inch and nine lines, than thoſe contiguous on either ſide, and the other lateral quills contract gradually, ſo that the outermoſt are five inches ſhorter than the mid-ones. The eyes are encircled by a fleſh coloured ſkin; the iris is fine orange; the bill is black, with a little red at the baſe of the upper mandible; the feet and nails are fleſh coloured. This ſpecies is ſcattered through almoſt all the warm parts of America.

The Parroquet mentioned by Labat is a variety of this*; the only difference being that there are ſome ſmall red feathers on the head, and the bill is white.—We muſt obſerve that Briſſon has confounded this laſt bird with the *Aiuru-catinga* of Marcgrave, which is one of our Cricks.

* *Perrique de la Guadaloupe*, Labat.
Pſittaca Aquarum Lupiarum, Briſſ.

[A] Specific character of the *Pſittacus Rufiroſtris*: "It is green; its bill and feet are red; its tail-quills tipt with bluiſh; its orbits carnation."

THE

RED-FRONTED PARROQUET.

SECOND SPECIES,

With a long and unequal Tail.

Pſittacus Canicularis, Linn. and Gmel.
Pſittacus Braſilienſis fronte rubro, Briſſ.
The *Red and Blue-headed Parrakeet*, Edw. and Lath.

THIS bird is found, like the preceding, in almoſt all the warm parts of America. It was firſt deſcribed by Edwards. The front is of a bright red; the crown of the head of a fine blue; the back of the head, the upper ſide of the neck, the ſuperior coverts of the wings and thoſe of the tail are deep green; the throat and all the under ſide of the body are a little yellowiſh; ſome of the great coverts of the wings are blue; the primaries are dull aſh colour on the inſide, and blue on the outſide, and at the extremity; the iris is orange; the bill cinereous; and the feet reddiſh.

We muſt obſerve that Edwards, and Linnæus, who has copied him, confound this Parroquet with the *Tui-apute-juba* of Marcgrave, which conſtitutes a different ſpecies, as will appear from the following deſcription.

[A] Specific character of the *Pſittacus Canicularis*: "It is green, with a red front; the back of its head and the outermoſt quills of its wings, are blue; its orbits fulvous."

SOCIETY

N°149

THE ILLINOIS PARROT.

The APUTE JUBA.

THIRD SPECIES,
With a long and unequal Tail.

Pſittacus Pertinax, Linn. Gmel. and Bor.
Pſittaca Illiniaca, Briſſ.
Pſittacus Viridis malis croceis, Klein.
The *Yellow-faced Parrot*, Edw.
The *Illinois Parrot*, Penn. and Lath.

THE front, the ſides of the head, and the top of the throat, are of a fine yellow; the crown and back of the head, the upper ſurface of the neck and of the body, the wings and the tail, are of a fine green. Some of the ſuperior coverts of the wings, and the great quills, are edged exteriorly with blue; the two quills in the middle of the tail are longer than the lateral ones, which continually ſhorten, inſomuch that the mid-ones exceed the outermoſt by an inch and nine lines; the lower belly is yellow; the iris deep orange; the bill and feet cinereous.

From this deſcription alone it is manifeſt that this ſpecies is not the ſame with the preceding, and is even widely different. Beſides, it is very common in Guiana, where the former is never found. It is vulgarly called at Cayenne the *Wood-lice Parrakeet*, becauſe it generally lodges in the holes where theſe inſects neſtle. It remains the whole year in Guiana, and frequents the ſavannas and the cleared lands. It is very

improbable that this ſpecies extends to the country of the Illinois, or roams ſo far north, as Briſſon aſſerts; eſpecially as no ſpecies of Parrot is found beyond Carolina, and only one ſpecies in Louiſiana, which we have before deſcribed [A].

The GOLDEN-CROWNED PARROQUET.

FOURTH SPECIES,
With a long and unequal Tail.

Pſittacus Aureus, Linn. and Gmel.
Pſittaca Braſilienſis, Briſſ.

THIS name was beſtowed by Edwards, who took the bird for a female of the preceding ſpecies. What he deſcribed was really a female, ſince it layed five or ſix ſmall white eggs in England, and lived fourteen years in that climate. But the ſpecies is different from the foregoing, for though both are common in Cayenne, they never aſſociate together, but keep in great ſeparate flocks; and the males reſemble the females. The Golden-crowned Parroquet is called in Guiana the *Parrakeet of the Savannas*; it ſpeaks extremely well, is very fondling and intelligent;

[A] Specific character of the *Pſittacus Pertinax*: "It is green; its cheeks fulvous; the quills of its wings and tail ſomewhat hoary."

whereas

whereas the preceding is not eſteemed, and articulates with difficulty.

This handſome Parroquet has a large orange ſpot on the fore part of the head; the reſt of the head, all the upper ſide of the body, the wings, and the tail, are of a deep green; the throat and the lower part of the neck, are of a yellowiſh green; with a ſlight tinge of dull red; the reſt of the under ſide of the body is pale green; ſome of the great ſuperior coverts of the wings are edged exteriorly with blue; the outer ſide of the feathers of the middle of the wings is alſo of a fine blue, which forms on each wing a broad longitudinal band of that beautiful colour; the iris is vivid orange; the bill and feet blackiſh [A].

The GUAROUBA, or YELLOW PARROQUET.

FIFTH SPECIES,
With a long and unequal Tail.

Pſittacus-Guarouba, Linn. and Gmel.
Pſittaca Braſilienſis Lutea, Briſſ.
Qui Juba Tui, Marc. Ray, &c.
The *Braſilian Yellow Parrot*, Lath.

MARCGRAVE and De Laët are the firſt who take notice of this bird, which is found in

[A] Specific character of the *Pſittacus Aureus*: "It is green; its cere and its orbits bluiſh carnation; its top golden; an obliique blue ſtripe on the coverts of its wings."

Brazil,

Braſil, and ſometimes in the country of the Amazons, where however it is rare *, nor is it ever ſeen near Cayenne. This Parroquet, which the Brazilians call *Guiaruba*, that is, Yellow Bird, does not learn to ſpeak at all; and it is melancholy and ſolitary. Yet the ſavages hold it in great eſtimation for the ſake of its plumage, which is very different from that of the other Parrots, and on account of its being eaſily tamed. It is almoſt entirely yellow; only there are ſome green ſpots on the wings, whoſe ſmall quills are green, fringed with yellow; the primaries are violet fringed with blue; and the ſame mixture of colours appears on the tail, whoſe extremity is blue-violet; its middle and rump are green, edged with yellow; all the reſt of the body is pure yellow, and vivid ſaffron, or orange. The tail is five inches in length, which is that of the body; it is much tapered, ſo that the laſt lateral feathers are one half ſhorter than thoſe of the middle. The Yellow Mexican Parrakeet, given by Briſſon from Seba, appears to be a variety of this; and the little pale red which Seba repreſents on the head of his bird *Cocho*, and which was perhaps only an orange tint, does not form a ſpecific character.

* "The rareſt of the Parrots are thoſe which are entirely yellow, with a little green at the extremity of the wings: I never ſaw any of this ſort but at Para." La Condamine, *Voyage a Riviere des Amazones*, *p.* 173.

THE

YELLOW-HEADED PARROQUET.

SIXTH SPECIES,

With a long and unequal Tail.

Pſittacus Carolinenſis, Linn. and Gmel.
Pſittaca Carolinenſis, Briſſ.
The *Carolina Parrot*, Cateſby, Penn. and Lath.

THIS Parroquet appears to be one of thoſe which travel from Guiana to Carolina, to Louiſiana*, and even to Virginia. The front is of a beautiful orange; all the reſt of the head, the throat, the half of the neck, and the fan of the wing, are of a fine yellow; the reſt of the body, and the ſuperior coverts of the wings, are light green; the great quills of the wings are brown on the inner ſide; the outer ſide is yellow, as far as one third of its length, it then grows green and blue near the extremity; the middle quills of the wings, and thoſe of the tail, are green; the two middle ones of the tail are an inch and half longer than thoſe adjacent on either ſide; the iris is yellow; the bill is yellowiſh white; and the feet are gray.

* "I ſaw alſo that day, for the firſt time, Parrots (in Louiſiana); they appear along the Teakiki, but in ſummer only: theſe were ſtray-birds, which repaired to the Miſſiſſippi, where they occur in all ſeaſons. They are ſcarcely larger than black-birds; their head is yellow, with a red ſpot on the middle; on the reſt of their plumage green predominates." *Hiſt. de la Nouv. France*, par Charlevoix. *Paris*, 1744, t. III. p. 384.

Theſe

Theſe birds, ſays Cateſby, feed upon the ſeeds and kernels of fruits, particularly apples, and the grains contained in cypreſs cones. In autumn they reſort to the orchards in great flocks, and as they tear and mangle fruits to obtain the kernel, which is the only part that they eat, they do much injury. They penetrate as far as Virginia, which is the moſt northern colony, ſubjoins Cateſby, where I heard of Parrots being ſeen. This is alſo the only ſpecies found in Carolina, where a few breed; but moſt of them retire ſouthwards in the love ſeaſon, and appear again during the harveſt; being enticed by the fruit trees, and rice crops. The colonies between the tropics ſuffer greatly from the influx of Parrots on their plantations. In the months of Auguſt and September of 1750 and 1751, a prodigious number of Parrots of all kinds arrived in Surinam, and ſpread in flocks among the ripe coffee; they ate the red huſks, without touching the beans, which they ſuffered to fall to the ground. In 1760, about the ſame ſeaſon, new ſwarms of theſe birds appeared, and, extending along the coaſt, did much injury, though it could not be conjectured whence they came *. In general, the ripeneſs of fruits, the plenty or ſcarcity of food in different countries, compel

* Piſtorius. *Beſchriving van colonie van Surinaamen*, Amſterdam, 1768.

certain

certain ſpecies of Parrots to *flit* from one tract to another *.

The ARA PARROQUET.

SEVENTH SPECIES,
With a long and unequal Tail.

Pſittacus-Makawuanna, Gmel.
The *Parrot Maccaw*, Lath.

BARRERE is the firſt who has noticed this bird. It is however frequently ſeen in Cayenne, where it is reckoned migratory. It haunts the overflowed ſavannas, like the Aras, and alſo ſubſiſts on the fruits of the palmetto. It is called the *Ara Parroquet*, becauſe it is larger than the other Parroquets; its tail very long, being nine inches, and its body the ſame; like the Aras alſo, it has a naked ſkin from the corners of the bill to the eyes, and pronounces diſtinctly the word *Ara*, though with a raucous voice, and lower and ſhriller. The natives at Cayenne call it *Makavouanne*.

* "In the *Antis* are found Parrots of all ſizes and colours. Theſe birds iſſue from the country of the Antis, when the cara or maize is ſown, of which they are very fond; and accordingly they make great havock. The *Guacamayas* alone, on account of their unwieldineſs, never ſally from the country of the Antis; they all fly in flocks, yet one ſpecies intermingles not with another." *Garcilaſſo*, Hiſt. des Incas. *Paris*, 1744, t. II. p. 83.

[A] Specific character of the *Pſittacus Carolinenſis*: "It is green; its head, its neck, and its knees, yellow."

The

The quills of the tail are unequally tapered; all the upper ſide of the body, of the wings, and of the tail, deep green, with a dark caſt, except the great quills of the wings, which are blue, edged with green, and terminated with brown on the outſide; the upper part and the ſides of the head are green mixed with deep blue, ſo as, in certain poſitions, to appear entirely blue; the throat, the lower part of the neck, and the top of the breaſt, have a deep ruſty caſt; the reſt of the breaſt, the belly, and the ſides of the body, are of a paler green than that of the back; laſtly, on the lower belly there is ſome brown-red, which extends over ſome of the lower coverts of the tail; the quills of the wings and of the tail are yellowiſh-green below.

We have only to deſcribe the ſhort-tailed Parroquets of the new continent, to which we have given the generic name of *Toui*, by which they are known in Brazil.

The TOUIS, or SHORT-TAILED PARROQUETS.

THESE are the ſmalleſt of all the Parrots which inhabit the new continent: their tail is ſhort, and their bulk exceeds not that of the ſparrow, and moſt of them are incapable of being taught to ſpeak; for of the five ſpecies with which we are acquainted, there are only two which can acquire that talent. The Tuis appear to be found in both continents, and, though not exactly of the ſame ſpecies, they are analogous and related, becauſe they have been tranſported, as I formerly mentioned. Yet I am inclined to think that they are all originally natives of Brazil, whence they have been introduced into Guinea and the Philippine iſlands.

The YELLOW-THROATED TOUI.

FIRST SPECIES
Of ſhort-tailed Toui.

Pſittacus-Tovi, Gmel.
Pſittacula gutture luteo, Briſſ.
The *Yellow-throated Parrakeet*, Lath.

THE head and all the upper ſide of the body are of a fine green; the throat is of a fine orange

orange colour; all the under ſide of the body yellowiſh green; the ſuperior coverts of the wings are variegated with green, brown, and yellowiſh; the inferior coverts are fine yellow; the quills of the wings are variegated with green, yellowiſh, and deep cinereous; thoſe of the tail are green and edged internally with yellowiſh; the bill, the feet, and the nails, are gray [A].

The SOSOVE.

SECOND SPECIES
Of Toui or ſhort-tailed Parroquet.

Pſittacus-Soſove, Gmel.
The *Cayenne Parrakeet*, Lath.

SOSOVE is the Galibi name of this charming little bird, which is eaſily deſcribed, ſince it is entirely of a brilliant green, except a ſpot of light yellow on the quills of the wings, and on the ſuperior coverts of the tail; the bill is white, and the feet gray.

This ſpecies is common in Guiana, eſpecially near Oyapoe, and the river Amazons. It can eaſily be tamed, and taught to ſpeak. Its voice is like that of Punch in the puppet-ſhews; and when well trained it chatters perpetually [B].

[A] Specific character of the *Pſittacus Tovi*: "It is green; a pale orange ſpot on its throat; a broad cheſnut bar on its wings, with a green gold luſtre."

[B] Specific character of the *Pſittacus Soſove*: "It is green, with a dilute yellow ſpot on its wings and the covert of its tail."

The TIRICA.

THIRD SPECIES
Of Toui, or ſhort-tailed Parroquets.

Pſittacus-Tirica, Gmel.
Pſittacula Braſilienſis, Briſſ.
The *Green Parrakeet*, Lath.

MARCGRAVE firſt deſcribed this bird. Its plumage is entirely green; the eyes are black; the bill carnation; and the feet bluiſh. It is ſoon tamed and taught to ſpeak, and is very gentle, and eaſily managed.

The *ſmall Chatterer* of the *Planches Enluminées* ſeems to be of the ſame ſpecies: it is alſo entirely green; its bill fleſh coloured, and of the uſual ſize of a Toui.

The *Tuin* of Jean de Laët * does not mean any particular ſpecies, but comprehends all the Parroquets in general; and therefore we ought not, with Briſſon, to refer it to the *Tui-tirica* of Marcgrave.

Sonnerat mentions a bird which he ſaw in the iſland of Luçon, and which much reſembles the *Tui-tirica* of Marcgrave. It is of the ſame bulk, and its plumage wholly dyed green, though deeper above, and lighter below. But it is diſtinguiſhed by the gray colour of its bill, which is carnation in the other, and by the gray caſt

* *Deſcription des Indes Occidentalis*, p. 490.

of its feet, which are bluiſh in the former: theſe differences would be inſufficient to conſtitute a ſpecies, if the climates were not ſo diſtant. It is poſſible, and even probable, that this bird was carried from America to the Philippines, where it might undergo thoſe ſmall changes [A].

The ETE, or TOUI-ETE.

FOURTH SPECIES
Of Toui, or ſhort-tailed Parroquet.

Pſittacus Paſſerinus, Linn. Gmel. and Bor.
Pſittaca Braſilienſis uropygio cyano, Briſſ.
Tuite, Ray and Will.
The *Short-tailed Green Parrakeet*, Bancroft.
The *Leaſt Blue and Green Parrakeet*, Edw. and Lath.

WE are likewiſe indebted to Marcgrave for the account of this bird. It is found in Brazil; its plumage is in general light green; but the rump, and the top of the wings, are of a fine blue; all the quills of the wings are edged with blue on the outſide, which forms a long blue band when the wings are cloſed; the bill is fleſh-coloured, and the feet cinereous.

To the ſame ſpecies we may refer the bird denominated by Edwards the *Leaſt Green and Blue Parrakeet*, the only difference being that

[A] Specific character of the *Pſittacus Tirica*: "It is green; its bill carnation; its feet and nails bluiſh."

its

its wing-quills are not edged with blue, but with yellowiſh-green, and that the bill and feet are fine yellow [A].

The GOLDEN-HEADED TOUI.

FIFTH SPECIES
Of ſhort-tailed Parroquet.

Pſittacus-Tui, Gmel.
Pſittacula Braſilienſis Icterocephalos, Briſſ.
The *Gold-head Parraket*, Lath.

THIS bird is alſo found in Brazil. All its plumage is green, except the head, which is of a fine yellow; and, as its tail is very ſhort, we muſt not confound it with another Parroquet which has alſo a gold colour, but, at the ſame time, a long tail [B].

A variety, or at leaſt a contiguous ſpecies, is delineated in the *Planches Enluminées*, where it is denominated the *Little Parraket of the iſland of St. Thomas*, becauſe the Abbe Aubry, Rector of St. Louis, in whoſe cabinet the ſpecimen was lodged, ſaid that it came from that iſland. But the only difference between it and the Gold-

[A] Specific character of the *Pſittacus Paſſerinus*: "It is yellow-greeniſh; a ſpot on its wings, and their under ſurface blue."

[B] Specific character of the *Pſittacus-Tui*: "It is green; its front orange; its orbits bright yellow."

head Toui is that the yellow tinge is much paler.

Theſe five ſpecies are all the Touis of the new world that we are acquainted with; nor are we certain whether the two ſmall ſhort-tailed Parrakeets, the firſt noticed by Aldrovandus, the ſecond by Seba, ought to be claſſed with the reſt, for the deſcriptions are very imperfect. That of Aldrovandus ſeems rather to be a *Cockatoo*, by reaſon of the tuft on its head, and that of Seba appears to be a *Lory*, becauſe its plumage is almoſt entirely red. But we know none of the Cockatoos or Loris that reſemble them cloſely, or with which we could venture to claſs them.

ASIATIC SOC

No. 150

THE CURUCULI.

The CURUCUIS.

Les Couroucous, ou Couroucoais, Buff.

SUCH is the name which theſe birds bear in their native climate of Brazil. This word imitates their cry ſo exactly, that the natives of Guiana have omitted only the firſt letter, and call them *Urucoos*. Their characters are theſe: Their bill ſhort, hooked, indented, broader than it is thick, and much like that of the Parrots; it is ſurrounded at its baſe by ragged feathers, projecting forwards, but not ſo long as in the bearded birds, which we ſhall afterwards deſcribe; the legs alſo are very ſhort, and feathered within a little of the inſertion of the toes, which are placed two behind and two before. We know only three ſpecies, and theſe may perhaps be reduced to two, though nomenclators reckon ſix, ſome of which are varieties, and others belong to a different genus.

The RED-BELLIED CURUCUI.

Le Couroucoú à Ventre Rouge, Buff.

FIRST SPECIES.

Trogon-Curucui, Edw. and Lath.
Trogon Braſilienſis Viridis, Briſſ.
Tzinitzian, Fernand. Johnſt. Will. and Ray.

THIS bird is ten inches and a half long; the head, the whole of the neck and the riſe of the breaſt, the back, the rump, and the coverts of the upper ſide of the tail, are of a fine brilliant green, but changing, and, in a certain poſition, blue; the coverts of the wings are blue gray, variegated with ſmall black zig-zag lines; and the great quills of the tail are black, except their ſhafts, which are partly white; the quills of the tail are of a fine green, like the back, except the two outer ones, which are blackiſh, and have ſmall tranſverſe gray lines; a part of the breaſt, the belly, and the coverts of the under ſide of the tail, are of a fine red; the bill is yellowiſh, and the legs are brown.

Another ſubject, which appears to have been a female, differed in no reſpect, except that all the parts, which were of a fine brilliant green in the firſt, are blackiſh-gray in this, and without any reflections; the ſmall zig-zag lines are much more indiſtinct, becauſe the dark brown predominates, and the three outer quills of the tail have,

have, on their exterior webs, alternate black and white bars; the upper mandible is entirely brown, and the lower yellowiſh; laſtly, the red colour is much leſs ſpread, occupying only the lower belly, and the coverts of the under ſurface of the tail.

There is a third ſubject in the King's Cabinet, which differs chiefly from the two preceding in theſe reſpects: the tail is longer, and the three outer quills on each ſide have their outer webs and their tips white; the three exterior quills of the wing are marked with tranſverſe ſpots, that are alternately white and black at their margin; there is alſo a gold-green ſhade, waving on the back and on the quills in the middle of the tail, which has not place in the preceding. But the red tinge is diſpoſed in the ſame way, and begins only at the lower belly, and the bill is ſimilar in its ſhape and colour.

The Chevalier Le Febvre Deſhayes, correſpondent of the Cabinet, whom we have often had occaſion to quote as an excellent obſerver, has ſent us a coloured drawing of this bird, with excellent obſervations. He ſays that it is called at St. Domingo *the red drawers* *, and in many of the other iſlands it is termed *the Engliſh lady* †. "This bird retires," he adds, "into the depths of the foreſts during the ſeaſon of its amours; its melancholy and even diſmal accents ſeem to

* *Caleçon rouge.* † *Demoiſelle ou Dame Angloiſe.*

expreſs that profound ſenſibility which carries it into the deſert, to enjoy in ſolitude the tenderneſs of love, and that languor, which is more delicious perhaps than its tranſports. This cry alone reveals its retreat, which is often inacceſſible, and difficult to diſcover.

"Their loves commence in April: they chooſe the hole of a tree, and line it with the duſt of worm-eaten wood; and this bed is as ſoft as cotton or down. If they cannot find ſuch duſt, they break freſh wood with their bill, and reduce it to powder; and their bill, which is indented near the point, is ſufficiently ſtrong for that purpoſe: it alſo ſerves to enlarge the hole, when not ſufficiently wide. They lay three or four eggs, which are white, and ſomewhat ſmaller than thoſe of a pigeon.

"While the female hatches, the employment of the male is to bring ſupplies of food, to keep watch on a neighbouring bough, and to ſing. At other times he is ſilent and reſerved; but during incubation, he fatigues the echos with thoſe languiſhing ſounds, which how inſipid ſoever they may appear to us, undoubtedly ſooth the tedious occupation of his dear companion.

"The young, at the moment of their excluſion, are entirely naked, without any trace of feathers, but which begin to ſprout two or three days after. Their head and bill appear uncommonly thick, compared with the reſt of their

their body; their legs too ſeem exceſſively long, though they are very ſhort when the bird is grown. The male becomes ſilent the inſtant that the brood are hatched; but he again reſumes his ſong, with his loves, in the months of Auguſt and September.

"They feed their young with worms, caterpillars, and inſects. Their enemies are the rats, the ſerpents, and both the nocturnal and diurnal birds of prey; ſo that the ſpecies of the *Ooroocoais* is not numerous, moſt of them falling a ſacrifice to depredation.

"After the young ones are flown, they remain not long together; they yield to their ſolitary inſtinct and diſperſe.

"In ſome individuals the legs are reddiſh, in others they are ſlaty blue. It has not been obſerved whether this diverſity is occaſioned by age, or reſults from the difference of ſex."

The Chevalier Deſhayes tried to raiſe ſome of the preceding year, but his attempts were fruitleſs; and, either from a languid or a lofty temper, they obſtinately refuſed to eat. "Perhaps," ſays he, "I ſhould have ſucceeded better, if I had taken them juſt after hatching; but a bird, which lives ſo remote from us, and which ſeeks felicity in the freedom and ſilence of the deſert, ſeems not adapted for ſlavery, and muſt continue a ſtranger to all the habits of the domeſtic ſtate."

[A] Specific character of the *Trogon-Curucui*: "It is gold-green, below fulvous; its throat black."

THE

YELLOW-BELLIED CURUCUI.

Le Couroucou à Ventre Jaune, Buff.

SECOND SPECIES.

Pſittacus Viridis, Linn. and Gmel.
Trogon Cayanenſis Viridis, Briſſ.

THIS bird is about eleven inches long; the wings when cloſed do not reach quite to the tail; the head and the upper ſide of the neck are blackiſh, with reflections of handſome green in ſome parts; the back, the rump, and the coverts of the upper ſide of the tail, are brilliant green, like the thighs; the great coverts of the wings are blackiſh, with ſmall white ſpots; the great quills of the wings are blackiſh, and the four or five outer ones have a white ſhaft; the quills of the tail are of the ſame colour with thoſe of the wings, except that they have ſome reflections of a brilliant green; the three outer ones on each ſide are radiated tranſverſely with black and white; the throat and the under ſide of the neck are dark brown; the breaſt, the belly, and the coverts below the tail, are of a fine yellow; the bill is indented, and appears dark brown, as well as the legs; the nails are black; the tail is tapered, the feather on each ſide being two inches

ſhorter than the two middle ones, which are the longeſt [A].

Between the Red-bellied Curucui and the Yellow-bellied Curucui lie ſome varieties, which our nomenclators have taken for different ſpecies. Such, for inſtance, is the one denominated, in the *Planches Enluminées*, the *Guiana Curucui*, which is only a variety of the Yellow-bellied Curucui, occaſioned by age; the ſole difference being, that the upper ſide of the back, which in the adult is fine azure, is aſh-coloured in the young one.

Further, the bird repreſented in the *Planches Enluminées* by the name of the *Rufous-tailed Curucui of Cayenne*, is a variety of the ſame Yellow-bellied Curucui, produced by moulting; ſince the only difference is that the feathers of the back and tail are rufous inſtead of blue *.

There is alſo a variety of this Yellow-bellied Curucui: it is the bird termed by Briſſon the *White-bellied green Curucui of Cayenne*. The only difference lies in the colour of the tail, which may be owing to age, for the feathers were not completely formed. It might alſo be an acci-

[A] Specific character of the *Trogon Viridis*; "It is gold-green, below yellow; its throat black; a gold-green bar on its breaſt."

* *Trogon Rufus*, Gmel.
The *Rufous Curucui*, Lath.
Specific character: "It is rufous; its belly, its vent, and its thighs, yellow; the coverts of its wings ſtreaked with black and gray; its wing-quills and the middle quills of the tail tipt with black."

dental

dental diverſity; but certainly none of theſe three birds can be regarded as a diſtinct and ſeparate ſpecies *.

We have ſeen another individual whoſe breaſt and belly were whitiſh, with a tinge of citron in many parts; which made us ſuſpect that the White-bellied Curucui, juſt mentioned, was only a variety of the Yellow-bellied Curucui.

The VIOLET-HOODED CURUCUI.

Le Couroucou à Chaperon Violet, Buff.

THIRD SPECIES.

Trogon Violaceus, Gmel.
The *Violet-headed Curucui*, Lath.

THE throat, neck, and breaſt, are of a very duſky violet; the head is of the ſame colour, except that of the front, and of the ſpace round the eyes and ears, which is blackiſh; the eye-brows yellow; the back and rump of a deep green, with gold reflections; the ſuperior coverts of the tail are bluiſh-green, with the ſame gold reflections: the wings are brown, and their coverts, as well as the middle quills, are dotted with white; the two central quills of the tail are green, verging on bluiſh, and terminated with black; the two adjacent pairs are of the

* *Trogon Viridis*, Var. Linn. and Gmel.

ſame

ſame colour in the uncovered part, and blackiſh in the reſt; the three lateral pairs are black, ſtriped and terminated with white; the bill is lead colour at the baſe, and whitiſh near the point; the tail exceeds the wings when cloſed, by two inches and nine lines, and the total length of the bird is nine inches and a half.

M. Koelreuter calls this bird *Lanius* *; but it is of a genus very different from that of a ſhrike, a lanner, or another bird of prey. A broad ſhort bill, and briſtles around the lower mandible; ſuch are the characters which it has in common with the Curucuis. But the properties wherein it reſembles the cuckoos, that the legs are very ſhort and feathered to the nails, which are ſlender and diſpoſed in pairs, the one before and the other behind; that the nails are ſhort, and ſlightly hooked; and laſtly, the want of a membrane around the baſe of the bill: all theſe differ from the characters of the rapacious tribe.

The Curucuis are ſolitary birds which live in the heart of damp foreſts, where they ſubſiſt on inſects; they are never obſerved to conſort in flocks; they generally ſit on the middle branches, the cock and hen on ſeparate but adjacent trees, and call each other alternately, by repeating their hollow, monotonous cry, *ooroocoais*. They never fly far, but only from tree to tree, and ſeldom even do that; for they remain during the greateſt part

* *Comment. Petropol.* 1763.

of

of the day in the ſame ſpot, concealed beneath the thickeſt boughs; where, though their voice is continually heard, yet, as they are motionleſs, they can hardly be diſcovered. They are clothed ſo thickly with plumage, that they appear larger than in reality; they would ſeem to equal the bulk of a pigeon, though they have not more fleſh than a thruſh. But if their feathers be numerous and cloſe, they are weakly rooted, for they drop with the leaſt rubbing; ſo that it is difficult to prepare ſpecimens for the cabinet. Theſe birds are among the moſt beautiful of South America. Fernandez ſays that the fine feathers of the Red-bellied Curucui were uſed by the Mexicans in making portraits, a gaudy kind of paintings, and other ornaments which they wore at feſtivals, or in battle [A].

There are two other birds mentioned by Fernandez, which Briſſon ſuppoſes to be Curucuis; but they undoubtedly belong not to that genus.

The firſt is what Fernandez compares to the ſtare, and which we have formerly noticed *. I am aſtoniſhed that Briſſon could fancy that it was a Curucui, ſince Fernandez himſelf refers it to the genus of the ſtares, and their figures are ſimilar. But the ſhape of the bill, the diſ-

[A] Specific character of the *Trogon Violaceus*: "It is violet; its eye-brows bright yellow; its back and rump gold-green; its wings brown; its intermediate tail-quills bluiſh-green, tipt with black."

* *Trogon Mexicanus*, Briſſ.

poſition

poſition of the toes, the form of the body, every property of the bird in ſhort, is ſo widely different from thoſe of the Curucuis, that they never with propriety can be aſſociated.

The ſecond bird which Briſſon has taken for a Curucui is one which Fernandez * ſays is exceedingly beautiful, and of the ſize of a pigeon; that it frequents the ſea-ſhore; and that its bill is long, broad, black, and a little hooked: this form of the bill is very different from what obtains in the Curucuis, a circumſtance alone ſufficient to exclude it from this genus. Fernandez ſubjoins that it does not ſing, and that its fleſh is unfit for eating; that its head is blue, and the reſt of its plumage blue, variegated with green, black, and whitiſh. But theſe indications are not preciſe enough to determine the ſpecies.

* *Trogon Mexicanus Varius*, Briſſ.

The CURUCUCKOO.

Cuculus Braſilienſis, Linn. and Gmel.
Cuculus Braſilienſis Criſtatus Ruber, Briſſ.
The *Red-cheeked Cuckoo*, Lath.

BETWEEN the extenſive family of the Cuckoo and that of the Curucui, we ſhall place a bird which ſeems to participate of both; ſuppoſing that the indication of Seba is leſs faulty than moſt of thoſe inſerted in his bulky work: his account is as follows—"The head is of a pale red, bearing a fine tuft of brighter red, variegated with black. The bill is pale red; the upper ſide of the body is bright red; the coverts of the wings and the under ſide of the body are pale red; the quills of the wings and thoſe of the tail are yellow, ſhaded with a blackiſh tint."

This bird is not ſo large as the magpie, its total length being about ten inches.

We muſt obſerve that Seba takes no notice of the diſpoſition of its toes, and in his figure they are diſpoſed by three and one, not by two and two. But the aſſerting the bird to be a *Cuckoo*, implied the latter.

[illegible] SOCIETY

N°. 151

THE TOURACO CUCKOO

The TOURACO.

Cuculus-Perſa, Linn. and Gmel.
Cuculus Guineenſis Criſtatus Viridis, Briſſ.
The *Crown Bird from Mexico*, Alb.

THIS is one of the moſt beautiful of the African birds; for beſides that its plumage is brilliant and its eyes ſparkle with fire, it has a ſort of creſt on the head, or rather a crown, which confers an air of diſtinction. I cannot conceive, therefore, why our nomenclators range it with the cuckoos, which, every body knows, are ugly birds; it is alſo diſcriminated by its tuft, and by the ſhape of its bill, of which the upper part is more arched than in the cuckoos. Indeed the only common character is that it has two toes before and two behind; a property which belongs to many birds.

The Touraco is as large as a jay; but its long broad tail ſeems to increaſe its bulk: its wings are however very ſhort, not reaching to the origin of the tail. The upper mandible is convex, and covered with feathers reflected from the forehead, and in which the noſtrils are concealed. Its eye, which is lively and full of fire, is encircled by a ſcarlet eye-lid, which has a great number of protuberant *papillæ* of the ſame colour. The beautiful tuft, or rather *mitre*, that

crowns its head is a bunch of briſtled feathers, which are fine and ſilky, and conſiſt of ſuch delicate fibres that the whole is tranſparent. The beautiful green which covers all the neck, the breaſt, and the ſhoulders, is alſo compoſed of fibres of the ſame kind, and equally fine and ſilky.

We know two ſpecies, or rather two varieties, of the genus; the one termed the *Abyſſinian Touraco*, and the ſecond the *Touraco from the Cape of Good Hope*.

The only difference lies in the tints, for the bulk of the colours is the ſame. The Abyſſinian Touraco has a blackiſh tuft, compact like a lock, and reflected backwards: the feathers on the forehead, the throat, and compaſs of the neck, are meadow green; the breaſt, and top of the back, are of the ſame colour, but with an olive tinge, which melts into a purple brown, heightened by a fine green gloſs; all the back, the coverts of the wings, and their quills next the body, and all thoſe of the tail, are coloured in the ſame way; all the primaries are of a fine crimſon, with a black indenting on the ſmall webs, near the tip: we cannot conceive how Briſſon ſaw only four of theſe red feathers. The under ſide is dun gray, ſlightly ſhaded with light gray.

The Touraco of the Cape of Good Hope differs not from the Abyſſinian one, except that the

the tuft is of a light green, and ſometimes fringed with white. The neck is of the ſame green, which melts on the ſhoulders into a darkiſh tint, with gloſſy green reflections.

We had a Touraco alive from the Cape, and were aſſured that it lived upon rice. No other food was offered to it at firſt, and this it would not touch, but grew famiſhed, and, in that extremity, it ate its own excrements. During three days, it ſubſiſted only on water and a bit of ſugar. But obſerving grapes brought to the table, it ſhewed a ſtrong appetite for them; ſome were given to it, which it ſwallowed greedily. It diſcovered in the ſame way a fondneſs for apples, and afterwards for oranges. From that time it was fed on fruit for ſeveral months. This ſeemed to be the natural food; its curved bill not being in the leaſt adapted for collecting grain. The bill is wide, and cleft as far as under the eyes; the bird hops, but does not walk; its nails are ſharp and ſtrong, its hold firm; its toes are ſtout, and inveſted with thick ſcales. It is lively, and buſtles much; it continually utters a weak, low, and hoarſe cry, *crêu, crêu*, from the bottom of its gizzard, without opening its bill. But ſometimes it has a very loud ſcream, *cŏ, cŏ, cŏ, cŏ, cŏ, cŏ, cŏ*; the firſt notes low, the others higher, rapid, and noiſy, with a ſhrill and harſh voice. It vents this cry of its own accord, when it is hungry;

but it may be made to repeat it at pleaſure, if one prompts it by imitation.

This beautiful bird was given to me by the Princeſs of Tingri, to whom my moſt reſpectful thanks are due. It is even handſomer than at firſt, for it was in moult when I made the foregoing deſcription. At preſent, which is four months ſince that time, the plumage is reſtored with freſh beauties; there are two white ſtreaks of ſmall feathers, or ſhort ſilky hairs, the one pretty near the inner corner of the eye, the other before the eye, and extending backwards to the outer corner; between theſe two is another ſtreak of the ſame down, but of a deep violet caſt; the upper ſurface of the body and of the tail ſhines with a rich purpliſh blue, and the creſt is green and not fringed. Theſe new characters diſpoſe me to think that it does not reſemble the Touraco from the Cape of Good Hope ſo much as I at firſt ſuppoſed; it ſeems alſo to differ in the ſame properties from the Abyſſinian Touraco. We have therefore three varieties; but we cannot determine whether the diverſity belongs to the ſpecies or to the individual, whether it is periodical or conſtant, or only ſexual.

It does not appear that this bird is found in America, though Albin gives it as brought from Mexico. Edwards affirms that it is indigenous in Guinea, from whence the individual mentioned

mentioned by Albin was poſſibly tranſported into the new world. We are unacquainted with the habits of the bird, when it enjoys its native freedom; but as it is exceedingly beautiful, we may hope that travellers will obſerve them, and communicate their remarks,

[A] Specific character of the *Cuculus Perſa*: "Its tail is equal; its head creſted; its body bluiſh green; its wing-quills blood coloured."

The CUCKOO*.

Le Coucou, Buff.
Cuculus Canorus, Linn. Gmel. and Muller.
Cuculus, Geſner, Will. Johnſt. Briſſ. &c.

IN the age of Ariſtotle it was generally ſaid that no one had ever ſeen the hatch of the Cuckoo: it was known that this bird lays like the reſt, but makes no neſt; that it drops its eggs, or its egg (for it ſeldom depoſits two in the ſame place) in the neſts of other birds, whe-

* In Hebrew, according to the different authors, *Kaath*, *Kik*, *Kakik*, *Kakata*, *Schalac*, *Schaſchaph*, *Kore*, *Banchem*, *Euchem*: In Syriac, *Coco*: In Greek, Κοκκυξ: In Latin, *Cuculus*: In Italian, *Cucculo*, *Cucco*, *Cuco*, *Cucho*: In Spaniſh, *Cuclillo*: In German, *Kukkuk*, *Gucker*, *Guggauch*, *Gugckuſer*: In Flemiſh, *Kockok*, *Kockuut*, *Kockuunt*: In Swediſh, *Gioek*: In Norwegian, *Gauk*: In Daniſh, *Gioeg-Kukert*, *Kuk*, *Kukmanden*: In Lapponic, *Geecka*: In old Engliſh and in Scotch, *Gowk*.

A paſſage from an Italian author, Gerini, will illuſtrate the miſapplication of the name Cuckoo. "It lay its eggs in the neſt of the *curruca* (pettychaps); and hence a ſottiſh huſband, indifferent to the diſhonour of his marriage-bed and the impoſition of ſpurious children, has been called *curruca*: and afterwards that name was corrupted, from ignorance, into *cornuto* (horned). Formerly, and even at preſent, this word, as well as Cuckoo (cuckold), is beſtowed on a ſot, who is inſenſible to ſhame."

The Latins applied the word *cuculus* to a huſband who was unfaithful to his bed; and among the Greeks, it was beſtowed on thoſe caught in any diſgraceful action, or on perſons lazy and ſlothful. In general, the term conveyed an imputation of indolence and ſtupidity; in which ſenſe it is ſtill uſed among ſome nations in Europe. (~~So~~ *Gowk* is an expreſſion of reproach among the populace in Scotland.)

ther

ther larger or ſmaller than itſelf, ſuch as the warblers, the green-finches, the larks, the wood pigeons, &c.; that it often ſucks the eggs which it finds, and leaves its own in their ſtead, to be hatched by the ſtranger; that this ſtranger, particularly the pettychaps, acts the part of a tender mother to her ſuppoſititious brood, ſo that the young ones become very fat and plump *; that their plumage changes much when they arrive at maturity; and laſtly, that the Cuckoos begin to appear and are heard early in the ſpring; that they are feeble on their arrival; that they are ſilent during the dog-days; and that a certain ſpecies of them build in craggy rocks †. Such are the principal facts in the hiſtory of the Cuckoo: they were known two thouſand years ago, and ſucceeding ages have added nothing to the ſtock. Some circumſtances had even fallen into oblivion, particularly their breeding in holes

* It is ſaid even that the adults are not bad eating in autumn; but there are countries where, at no period of their age, in no condition of their fleſh, at no ſeaſon of the year, they are ever eaten, being regarded as birds unclean and unlucky: in others they are held propitious, and venerated as oracles: and ſome countries there are, where it is imagined that the ſoil under the perſon's right foot, who firſt hears the Cuckoo's note, is a certain preſervative againſt fleas and vermin.

† May not this be the Andaluſian Cuckoo of Briſſon, and the Great Spotted Cuckoo of Edwards? The ſubject mentioned by the latter was killed on the rock of Gibraltar, and its fellows might have been bred in Greece, whoſe climate is ſo nearly the ſame: laſtly, might not theſe have been ſparrow-hawks, miſtaken for Cuckoos by reaſon of the reſemblance of their plumage; and it is known that ſparrow hawks breed in the holes of craggy rocks.

of precipices. Nor have even the fabulous ſtories related of this ſingular bird undergone any alteration: error has its limits as well as truth, and, on a ſubject of ſo great celebrity, both have been exhauſted.

Twenty centuries ago it was aſſerted, as at preſent, that the Cuckoo is nothing elſe than a little ſparrow-hawk metamorphoſed; that this change is effected every year at a certain ſtated ſeaſon; that when it appears in the ſpring, it is conveyed on the ſhoulders of the kite, which, to aſſiſt the weakneſs of its wings, is ſo obliging as to carry it (remarkable complaiſance in a bird of prey like the kite); that it diſcharges upon plants a ſaliva which proves pernicious to them by engendering inſects; that the female Cuckoo takes care to lay into each neſt ſhe can diſcover, an egg like thoſe contained in it*, the better to deceive the mother; that the mother nurſes the young Cuckoo, and ſacrifices her own brood to it, becauſe they appear not ſo handſome†; that, like a true ſtep-mother, ſhe neglects them, or kills them, and directs the intruder to eat them: ſome ſuppoſed that the

* *See* Ælian, Salerne, &c. The true egg of the Cuckoo is larger than that of the nightingale; of a longer ſhape, of a gray colour almoſt whitiſh, ſpotted near the large end with violet-brown, very obſcure, and with deeper and more apparent brown; and laſtly, marked in the middle with ſome irregular ſtreaks of cheſnut.

† Obſerve that the Cuckoos are frightful when firſt hatched, and even many days after.

female Cuckoo returned to the neſt where ſhe had depoſited her egg, and expelled or devoured the other young, that her own might fare the better; others fancied that the little pretender deſtroyed its foſter-brothers, or rendered them victims to its voracity, by ſeizing excluſively all the food provided by their common nurſe. Elian relates that the young Cuckoo, ſenſible that it is a baſtard, or rather an intruder, and afraid of being betrayed by its plumage and treated as ſuch, flies away as ſoon as it can uſe its wings, and joins its real mother *. Others pretend that the nurſe diſcovers the fraud from the colours of the plumage, and abandons the intruder. Laſtly, others imagine that the young bird, before it flies, devours even its ſecond parent †, which had given it every thing but life; and the Cuckoo has been made the great ſymbol of ingratitude ‡.—But it is abſurd to impute crimes that are phyſically impoſſible. How could the young Cuckoo, which can hardly feed without aſſiſtance, have ſtrength ſufficient to devour a wood-pigeon, a lark, a yellow bunting, or a pettychaps? It is true, that, in ſupport of the poſſibility of the fact, the evidence of a grave author, Klein, may be

* *Nat. Anim. Lib. III.* 30. It is alſo ſaid, by running into an oppoſite extreme, that the Hen-cuckoo, neglecting her own eggs, hatches thoſe of others. *See* Acron, *in Sat. VII. Horat. Lib. I.*

† Linnæus, and others.

‡ "Ungrateful as a Cuckoo," ſay the Germans. Melancthon has left a fine harangue on the ingratitude of this bird.

adduced,

adduced, who made the obſervation at the age of ſixteen. Having diſcovered in his father's garden a pettychaps' neſt with a ſingle egg, which was ſuſpected to belong to a Cuckoo, he ſuffered the incubation to proceed, and even waited till the bird was feathered. He then ſhut both it and the neſt in a cage, which he placed on the ſame ſpot. A few days after he found the hen-pettychaps entangled in the wires of the cage, and its head ſticking in the throat of the young Cuckoo, which had ſwallowed it through miſtake, while catching greedily at a caterpillar that was probably too near. To ſome accident of this kind the Cuckoo owes its bad name. But it is not true that it devours its nurſe, or its foſter brothers: for, in the firſt place, its bill, though large, is too weak; the one mentioned by Klein could not cruſh the head of the pettychaps, and was choked by it; in the ſecond place, to remove all objections and ſcruples, I have decided the point by experiment. On the 27th of June, I put a young Cuckoo, which had been hatched in the ſpring, and was already nine inches long, in an open cage, with three young pettychaps, which were not one quarter feathered, and could not eat without aſſiſtance. The Cuckoo, far from devouring them, or even threatening them, ſeemed eager to repay its obligations to the ſpecies. It ſuffered the little birds, which were not in the leaſt afraid, to warm themſelves under

der its wings. On the other hand, a young owl, which had as-yet only been fed, began of itſelf to eat by devouring a pettychaps, which was lodged with it. I know that ſome qualify the account by ſaying that the Cuckoo ſwallows the chicks juſt as they burſt from the ſhell; and as theſe little embryos might be regarded as beings intermediate between eggs and birds, they might therefore be eaten by an animal which habitually feeds on eggs, whether hatched or not. But though this ſtatement is leſs improbable, it ought not to be admitted till it is evinced by obſervation.

With reſpect to the ſaliva of the Cuckoo, it is nothing elſe than a frothy exudation from the *larva* of a certain kind of graſsſhopper *. Perhaps the Cuckoo was obſerved to ſeek the larva under this froth, which might give occaſion to its being ſuppoſed to depoſit its ſaliva; and as an inſect was perceived to emerge, it would be imagined, that the ſaliva of the Cuckoo engendered vermin.

* This inſect is the *Cicada Spumaria* of Linnæus. It inhabits Europe, and is frequent on brambles, withies, and graſs ſtalks; it ſettles in the forking of the ſtalks, and evacuates numerous veſicles, reſembling froth, under which the larva lies concealed. This ſpittle, ſo frequent in the fields, is termed in French *ecume printanniere*, or ſpring froth, and the inſect which emerges is denominated *ſauterelle-puce* (graſshopper flea), or *cigale bedaude*. This inſect, it is ſaid, kills the Cuckoo by pricking it beneath the wing; which at beſt is only ſome miſrepreſented fact.—This frothy ſubſtance is well known in England by the name of *Cuckoo-ſpittle*, or *woodſare*.

I will

I will not ſeriouſly combat the notion, that the Cuckoo is annually metamorphoſed into a ſparrow-hawk *. It is an abſurdity which never was believed by the real naturaliſts, and ſome of them have confuted it. I ſhall only obſerve that the opinion ſeems to have taken riſe from the following circumſtances: the two birds are ſeldom found in our climates at the ſame time; they reſemble each other in their plumage †, in the colour of their eyes and legs, in the length of their tail, in having a membranous ſtomach, and a long tail, in their ſize, in their flight, and in their little fecundity; both live ſolitary, and have long feathers that deſcend from the legs on the tarſus, &c.; their plumage is alſo ſubject to vary, ſo that a bird which was taken for a beautiful merlin from its colours, was found on diſſection to be a female Cuckoo ‡. But theſe qualities are not what

* I have juſt witneſſed an odd enough ſcene. A ſparrow-hawk alighted in a pretty populous court yard; a young cock of this year's hatching inſtantly darted at him, and threw him on his back; in this ſituation the hawk, ſhielding himſelf with his talons and his bill, intimidated the hens and turkies, which ſcreamed tumultuouſly round him: when he had a little recovered himſelf, he roſe and was taking wing, when the cock ruſhed upon him a ſecond time, overturned him, and held him down ſo long that he was caught.

† Eſpecially ſeen from below when they fly. The Cuckoo ruſtles with its wings in riſing, and then ſhoots along like the tiercel falcon.

‡ *See* Salerne, *Hiſt. des Oiſeaux*, *p.* 40. M. Heriſſant ſaw many Cuckoos which, by their plumage, reſembled different kinds of male hawks, and one that reſembled a wood pigeon. *Mem. de l'Acad. des Sciences*, 1752, p. 417.

conſtitute

conſtitute a bird of prey; there are wanting the proper bill and talons, and the requiſite courage and ſtrength, in which the Cuckoo, conſidering its bulk, is very deficient *. M. Lottinger has obſerved that Cuckoos of five or ſix months old are as helpleſs as young pigeons; that they remain for hours in the ſame ſpot, and have ſo little appetite, that they muſt be aſſiſted in ſwallowing. It is true that when they grow up, they aſſume a little more reſolution, and may ſometimes paſs for birds of rapine. The Viſcount de Querhoent, whoſe teſtimony has the greateſt weight, ſaw one which, being apprehenſive of an attack from another bird, briſtled its feathers, and raiſed and depreſſed its head ſlowly and repeatedly, and then ſcreamed out; ſo that in this manner it often put to flight a keſtril, which was kept in the ſame houſe †.

The Cuckoo, far from being ungrateful, ſeems conſcious and mindful of its obligations. On its return from its winter retreat, it eagerly

* Ariſtotle juſtly obſerves that it is a timid bird; but I know not why he cites, as a proof of this timidity, its laying in the neſt of another. *De Generatione*, Lib. III. 1.

† An adult Cuckoo, raiſed by M. Lottinger, charged all other birds, the ſtrongeſt equally as the weakeſt, thoſe of its own kind or thoſe of another, aiming preferably at the head and eyes. It ruſhed even upon ſtuffed birds, and, though roughly repelled, it would never deſiſt from the attack. For my own part, I know from experience that the Cuckoos menace the hand extended to catch them, that they riſe and ſink alternately, briſtling their feathers, and that they even bite in a ſort of anger, though with little effect.

haſtens,

haſtens, it is ſaid, to the place of its birth; and if it finds its nurſe or foſter-brothers, they all join in mutual gratulations, each venting its joy in its own manner*. Theſe different expreſſions, theſe reciproeal careſſes, theſe ſalutations of gladneſs, and theſe ſportive frolics, are what have no doubt been miſtaken for battles between the ſmall birds and the Cuckoo. A real combat, however, may ſometimes take place, as when the birds ſurpriſe a Cuckoo about to deſtroy their eggs, in order to depoſit its own †. This well-aſcertained fact, that it lays in another's neſt, is the chief ſingularity in its hiſtory, though not altogether unexampled. Geſner ſpeaks of a certain bird of prey, which is much like the goſs-hawk, that lays in the neſt of the jackdaw: and though this unknown bird ſhould be ſuppoſed to be nothing but the Cuckoo, eſpecially as this is often taken for one of the rapacious tribe; it at leaſt cannot be denied that the wry-necks ſometimes raiſe their numerous progeny in the neſt of the nuthatch, as I myſelf have aſcertained; that the ſparrows ſometimes occupy the ſwallows' neſts, &c. Theſe inſtances, however, are very rare, and

* Friſch.

† Ariſtotle, Pliny, and thoſe who have copied or amplified from them, agree that the Cuckoo is timid; that all the ſmall birds annoy them, and that it can put none of theſe to flight: others add, that this perſecution originates from its reſemblance to a bird of prey; but when did the ſmall birds ever purſue the birds of prey?

the

the conduct of the Cuckoo muſt be regarded as an extraordinary phenomenon.

Another ſingularity in its hiſtory is, that it drops only one egg, at leaſt in the ſame neſt. It may indeed lay two eggs, as Ariſtotle ſuppoſes, and which appears poſſible from the diſſection of females, of which the ovarium frequently contained two eggs, well formed and of equal ſize *.

Theſe two ſingularities ſeem to imply a third: it is that their moulting is ſlower and more complete than in moſt birds. Sometimes in the winter ſeaſon we find, in the hollows of trees, one or two Cuckoos entirely naked, inſomuch that they may be taken for real toads. Father Bougaud, whom we have often quoted with that confidence which he merits, avers that he ſaw one in that ſtate, which was taken out of a hollow tree about the end of December. Of four other Cuckoos raiſed, the one by Johnſon, as mentioned by Willughby, the other by the Count de Buffon, the third by Hebert, and the fourth by myſelf; the firſt languiſhed on the approach of winter, grew ſcabby, and died; the ſecond and third caſt the whole of their feathers in November, and the fourth, which died towards the end of October, had loſt more than half. The ſecond and third alſo ſoon died; but, previous to their death, they fell into a

* Linnæus and Salerne.

kind

kind of numbneſs and torpor. Many other ſimilar facts are adduced; and though it has been erroneouſly concluded that all the Cuckoos which made their appearance in ſummer remain torpid during the winter *, concealed in hollow trees or under ground, diſrobed of their plumage, and, according to ſome, with an ample proviſion of corn (which this ſpecies never eats): if theſe concluſions ought not to be admitted, we may at leaſt ſafely infer that thoſe which, on the moment of their departure, are ſick or wounded, or too young, or in ſhort too weak, from whatever cauſe, to perform their diſtant retreat, remain behind, and paſs the winter ſheltered in the firſt hole they meet with which has a good aſpect, as do the quails †: 2. That, in general, theſe birds are very late in moulting, and conſequently ſlow in reſuming their plumage, which is hardly reſtored on their appearance in the be-

* Thoſe who ſpeak of theſe Cuckoos found in winter lodged in holes, agree that they are abſolutely naked, and reſemble toads. This account makes me ſuſpect that the ſuppoſed Cuckoos were often toads or frogs, which really paſs the winter without food, their mouth being then ſhut, and their jaws, as it were, glued together. —Ariſtotle poſitively aſſerts that the Cuckoos never appear during winter in Greece.

† In winter, ſportſmen ſometimes meet with quails ſquatted under a large root, or in ſome other hole facing the ſouth, with a little proviſion of grain and heads of different ſorts of corn. I muſt own that the Marquis de Piolenc and another perſon aſſured me that two Cuckoos which they reared and kept ſeveral years did not drop all their feathers in the winter: but as they remarked not the time, nor the duration, nor the quantity of the moult, we can draw no concluſion from theſe two obſervations.

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ginning of ſpring; accordingly, their wings are then very weak, and they ſeldom perch on lofty trees, but ſtruggle from buſh to buſh, and ſometimes alight on the ground, where they hop like the thruſhes. We may therefore ſay that, during the love ſeaſon, the ſurplus food is almoſt entirely ſpent on the growth of the feathers, and can furniſh very little towards the reproduction of the ſpecies; that, for this reaſon, the female Cuckoo never lays above one egg, or at moſt two; and that, as the bird has little abilities for generation, it has alſo leſs ardour for all the ſubordinate functions, which have the preſervation of the ſpecies as their object, ſuch as neſtling, hatching, and rearing their young, &c. which all originate from the ſame ſource, and are proportioned to it. Beſides, as the male inſtinctively devours birds' eggs, the female muſt be careful to conceal hers; ſhe muſt not return to the ſpot where ſhe has depoſited one, leſt the male diſcover it; ſhe muſt therefore chooſe the moſt concealed neſt, and which is alſo the moſt remote from his uſual haunts; and if ſhe has two eggs, ſhe muſt entruſt them to different nurſes: and thus ſhe takes all the precautions ſuggeſted by concern for her progeny, and yet carefully avoids betraying it through indiſcretion. Viewed in this way, the conduct of the Cuckoo will coincide with the general rule, and imply in the mother an affection for her young, and even a

rational kind of concern, which prefers their intereſt to the tender ſatisfaction of fondling and aſſiſting them by her offices. The diſperſion too of the eggs in different neſts, whatever be the cauſe, whether the neceſſity of concealing them from the male, or the ſmallneſs of the neſt *, would alone render it impoſſible for the female to hatch them. This fact is the more probable, as two eggs are often found completely formed in the ovarium, but very ſeldom two eggs in the ſame neſt. Beſides, the Cuckoo is not the only bird which never builds; many ſpecies of titmice, wood-peckers, king-fiſhers, &c. come under the ſame deſcription. We have already ſeen that it is not the only one that lays in other's neſts; there is alſo another example of a bird which never hatches its eggs; the oſtrich, in the torrid zone, depoſits its eggs in the ſand, and the heat of the ſun accompliſhes the developement of the embryos. It never loſes ſight of them indeed, and guards them aſſiduouſly; but it has not the ſame motives as the Cuckoo to conceal its attachment, and therefore does not take all the precautions which might exempt it from farther ſolicitude. The conduct of the Cuckoo is not then an abſurd irregularity, a monſtrous anomaly, a deviation from the laws

* Perſons of veracity have told me that they twice ſaw two Cuckoos in a ſingle neſt, but both times in the neſt of a throſtle: but the throſtle's neſt is larger than that of the pettychaps, of the willow-wren, or of the red-breaſt.

of

of nature, as Willughby expreſſes it; it is the neceſſary conſequence of eſtabliſhed principles, and the want of it would occaſion a void in the general ſyſtem, and interrupt the chain of phænomena.

What ſeems to have aſtoniſhed ſome naturaliſts the moſt, is that attention which they term unnatural in the nurſe of the Cuckoo, which neglects its own eggs to cheriſh thoſe of a foreign, and even hoſtile bird. One of theſe, an excellent ornithologiſt, ſtruck with the appearance, has made a ſeries of obſervations on this ſubject: he took the eggs of ſeveral ſmall birds out of their neſts, and in their place ſubſtituted a ſingle egg of a bird of a different kind, and not a Cuckoo; and he inferred from his experiments that, in ſimilar circumſtances, birds will hatch no ſingle egg but the Cuckoo's, which is therefore favoured by a ſpecial law of the Creator.

But this concluſion will appear raſh and precarious, if we attend to the following conſiderations: 1. the aſſertion being general, one contrary fact is ſufficient to overturn it; and for this reaſon, forty-ſix experiments made on twenty ſpecies are too few: 2. It would require many more, and thoſe performed with greater nicety, to eſtabliſh a propoſition which is an exemption to the general laws of nature: 3. Admitting the experiments to be ſufficiently numerous and accurate, they would be inconcluſive, if not made preciſely in the ſame manner, and

in like circumſtances. For inſtance, the caſe is not ſimilar when the egg is left by a bird or dropped by a man, eſpecially by one who is biaſſed to a favourite hypotheſis; may the frequent appearance of a perſon will diſturb the moſt eager brooder, and even cauſe her to abandon the education of a Cuckoo, though far advanced *, as I have myſelf experienced: 4. The fundamental aſſertions of this author are not quite accurate; for, though it ſeldom happens, the Cuckoo ſometimes lays two eggs in the ſame neſt. Further, he ſuppoſes that the Cuckoo ſucks all the eggs in the neſt, or deſtroys them ſomehow, leaving only its own; but this is hardly ſuſceptible of proof, and is improbable. But I have often received neſts, in which were ſeveral beſides the Cuckoo's egg which properly belonged to theſe neſts †, and even many of theſe eggs hatched, as well

* A meadow green-finch, whoſe neſt was on the ground under a thick root, abandoned the education of a young Cuckoo, merely from the inquietude occaſioned by the repeated viſits of ſome curious perſons.

† 16 May, 1774, five eggs of a titmouſe with one of the Cuckoo; the eggs of the titmouſe diſappeared by degrees.

19 May, 1776, five eggs of the redbreaſt with one egg of the Cuckoo.

10 May, 1777, four eggs of the nightingale with one egg of the Cuckoo.

17 May, 1777, two eggs of the titmouſe under a young Cuckoo, but which did not ſucceed. Some incident of this ſort might have given occaſion to ſay that the young Cuckoo charges itſelf with hatching the eggs of its nurſe. (*See* Geſner, p. 365.)

as

as that of the Cuckoo*: 5. But, what is no leſs deciſive, there are inconteſtible facts obſerved by perſons attached to no hypotheſis †, which are directly oppoſite to thoſe related by the author, and entirely overturn his inconcluſive inductions.

FIRST EXPERIMENT.

A hen canary, which ſat on her eggs and hatched them, continued to ſit when two blackbirds' eggs, brought from the woods, were put under her, though eight days afterwards; and the incubation would have ſucceeded if they had not been removed.

SECOND EXPERIMENT.

Another hen canary ſat four days on ſeven eggs, five of which were her own, and two thoſe of pettychaps; but, the cage being car-

* 14 June, 1777, a Cuckoo newly hatched in a throſtle's neſt, with two young throſtles, began to fly.

8 June, 1788, a young Cuckoo in the neſt of a nightingale, with two young nightingales, and an addle egg.

16 June, 1778, a young Cuckoo in the neſt of a red-breaſt, with a little red-breaſt that ſeemed to have been hatched before it.

M. Lottinger, in a letter dated 17 October, 1776, has related to me a fact, which he proved himſelf: in the month of June, a Cuckoo newly hatched in the neſt of a blackcap, with a young blackcap that already flew, and an addle egg. I could cite many other ſimilar examples.

† I owe the greateſt part of theſe facts to one of my relations, Madame Potot de Montbeillard, who has many years uſefully amuſed herſelf with birds, has ſtudied their habits, and traced their purſuits; and ſometimes has been ſo obliging as to make obſervations and try experiments relative to the ſubjects in which I was engaged.

ried to the lower ſtory, ſhe forſook them all. Afterwards ſhe laid two eggs, but did not ſit.

THIRD EXPERIMENT.

Another hen canary, whoſe mate had eaten her ſeven firſt eggs, ſat on the two laſt, along with three others, the one a canary's, the ſecond a linnet's, and the third a bulfinch's; but all theſe happened to be addle.

FOURTH EXPERIMENT.

A hen wren hatched a blackbird's egg; and a hen tree-ſparrow hatched a magpye's egg.

FIFTH EXPERIMENT.

A hen tree-ſparrow ſat on ſix eggs which ſhe had laid; five were added, and ſhe ſtill ſat; five more were added, and finding the number too large, ſhe ate ſeven of them, and continued to ſit on the reſt; two were taken away, and a magpye's egg put in their place, and the ſparrow hatched it, along with the ſeven others.

SIXTH EXPERIMENT.

There is a well-known method of hatching canaries' eggs, by putting them under a hen goldfinch, taking care that they are previouſly as far advanced in their incubation as thoſe of the goldfinch.

SEVENTH EXPERIMENT.

A hen canary having ſitten nine or ten days on three of her own eggs and two of thoſe of the blackcap, one of the latter was removed, in which the embryo was not only formed,

but

but living; two young yellow buntings, juſt hatched, were entruſted to her, and ſhe treated them with the ſame attention as ſhe would do her own, and ſtill continued to ſit on the four eggs that were left, but they turned out to be addle.

EIGHTH EXPERIMENT.

About the end of April 1776, another hen canary having laid an egg, it was taken away; and three or four days after, it being replaced, the bird ate it. Two or three days afterwards, ſhe laid another egg, and ſat on it; two chaffinch's eggs were then put under her, and ſhe continued to ſit, though ſhe had broken her own eggs; at the end of ten days the chaffinch's eggs were removed, being tainted. Two newly hatched yellow buntings were given, which ſhe reared very well. After which ſhe laid two eggs, ate one, and though the other was taken away, ſhe continued to brood as if ſhe had eggs; a ſingle egg of the redbreaſt was put under her, which ſhe hatched ſucceſsfully.

NINTH EXPERIMENT.

Another hen canary, having laid three eggs, broke them almoſt immediately; two chaffinch's eggs, and one of the blackcap, were ſubſtituted, on which ſhe ſat, and on three others, which ſhe laid ſucceſſively. In four or five days, the cage having been carried to a room in the lower ſtory, the bird forſook them. A ſhort time afterwards, ſhe laid an egg, to which

was joined one of the nuthatch, and then two others, to which a linnet's egg was added. She ſat on them all ſeven days, but preferring the two ſtrangers, ſhe threw out her own ſucceſſively on the three following days, and on the eleventh ſhe alſo toſſed out that of the nuthatch, ſo that the linnet's was the only one that ſucceeded. If this laſt egg had been that of a Cuckoo, what falſe inferences might have been drawn.

TENTH EXPERIMENT.

On the 5th of June, a Cuckoo's egg was placed under the hen canary mentioned in the ſeventh experiment, which ſhe hatched, along with three of her own. On the 7th, one of theſe eggs diſappeared; another on the 8th; and the third and laſt on the 10th; on the 11th, ſhe alſo ate the Cuckoo's egg.

Laſtly, a hen red-breaſt, ardently bent on brooding, has been ſeen to unite with her mate in repelling a female Cuckoo from the neſt; they ſcreamed, attacked furiouſly, and hotly purſued her *.

It

* *See* Obſervations ſur l'inſtinct des Animaux, t. I. p. 167, note 32. The author of that note adds ſome details relative to the hiſtory of our bird: "While one of the red-breaſts was ſtriking with its bill the lower belly of the Cuckoo, this bird ſhivered its wings, with an almoſt inſenſible quiver, opened its bill ſo wide that another red-breaſt, which aſſailed it in front, drove its head ſeveral times into the cavity, without receiving any injury; for the Cuckoo was no way irritated, but ſeemed to be in the condition of a female under the neceſſity of laying. In a little while the Cuckoo, being

It follows from theſe experiments, 1. That the females of many ſpecies of ſmall birds which hatch the Cuckoo's egg, hatch likewiſe other eggs along with their own: 2. That they often ſit on theſe eggs in preference to their own, which they ſometimes entirely deſtroy: 3. That they will hatch a ſingle egg, though it be not a Cuckoo's: 4. That they boldly drive off the female Cuckoo, when they ſurpriſe her dropping the egg in their neſt: 5. Laſtly, that they ſometimes eat this favoured egg, even in caſes where it is ſingle and alone. But a more general and important conſequence is, that the inſtinct of hatching which ſometimes appears ſo powerful in birds, is not determined by the kind or quality of the eggs; ſince they often eat or break them, or ſit on addle ones; they ſit even on balls of chalk or wood, and ſometimes brood in the empty neſt. When a bird hatches the egg of a Cuckoo, or of any other bird, ſhe follows therefore the general inſtinct; and it is unneceſſary to recur to any ſpecial appointment of

being exhauſted, began to totter, loſt its balance, and turned on the branch, from which it hung by the feet, its eyes half-ſhut, its bill open, and its wings expanded. Having remained about two minutes in this attitude, conſtantly haraſſed by the two red-breaſts, it quitted the branch, flew to perch at a diſtance, and appeared no more. The female red-breaſt reſumed her incubation, and all her eggs were hatched, and formed a little family, that long lived attached to this diſtrict." M. le Marquis de Piolenc alſo tells me in his letters of a Cuckoo being repelled by buntings.

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the Author of Nature in accounting for the conduct of the female Cuckoo *.

I aſk my reader's pardon for this long diſcuſſion, of the importance of which he may not be convinced. The bird which is the ſubject of this article has given riſe to ſo many errors, that I have thought it neceſſary, not only to extirpate theſe from natural hiſtory, but to oppoſe the attempts of thoſe who endeavour to convert them into metaphyſical principles. Nothing is more inconſiſtent with ſound philoſophy, than to multiply the laws of the univerſe; a phænomenon appears ſingle and unconnected, becauſe it is not accurately known; and it requires an attentive compariſon of the works of nature, a cloſe inveſtigation of the relations which ſubſiſt, to enable us to penetrate into her views.

I know more than twenty ſpecies of birds, in the neſts of which the Cuckoo depoſits her eggs; the pettychaps, the blackcap, the babbling warbler, the wagtail, the red-breaſt, the common wren, the yellow wren, the titmouſe,

* Friſch ſuppoſes another particular law, to explain why the preſent Cuckoos never hatch their eggs; it is, he ſays, becauſe a bird never hatches unleſs itſelf has been hatched by a female of its own ſpecies. He admits indeed that the firſt female Cuckoo emitted from Noah's ark muſt have laid in its own neſt, and muſt itſelf have taken the trouble of hatching its eggs. He might have ſpared this exception, for there are many inſtances of ſmall birds ſucceeding with their own eggs along with that of the Cuckoo.

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the nightingale, the red-tail, the ſky-lark, the wood-lark, the tit-lark, the linnet, the green-finch, the bulfinch, the throſtle, the jay, the black-bird, and the ſhrike. The Cuckoo's eggs are never found in the neſts of partridges or quails, at leaſt they never ſucceed in them, becauſe the young of theſe birds run almoſt the inſtant they are hatched. It is even ſingular that the young Cuckoos, which, when bred in the cage, require ſeveral months before they eat without aſſiſtance, can ever be raiſed in the neſts of larks, which, as we have ſeen in their hiſtory, beſtow only fifteen days on their education. But in the ſtate of nature, neceſſity, liberty, and the proper choice of food, will conſpire to unfold their inſtinct, and haſten their growth *; and may not the attention of the nurſe be proportioned to the wants of her adopted child?

We ſhall perhaps be ſurpriſed to find many granivorous birds, ſuch as the linnet, the greenfinch, and the bulfinch, in the liſt of the Cuckoo's nurſes. But many of theſe, it ſhould be remembered, feed their brood with inſects; and even the vegetable ſubſtances macerated in their craw, may ſuit the Cuckoo for a certain time, till it can pick up caterpillars,

* I muſt own that Salerne ſays, that this bird is fed whole months by its adoptive mother, which it follows crying inceſſantly for food. But this fact would be difficult to obſerve.

ſpiders,

ſpiders, and beetles, &c. which ſwarm about its manſion.

When the neſt, where it is lodged, belongs to a ſmall bird, and conſequently is conſtructed on a narrow ſcale, it is uſually found ſo much flattened that it can hardly be recogniſed; the natural effect of the bulk and weight of the young Cuckoo. Another conſequence is, that the eggs or young birds are frequently thruſt out of the neſt; but, though expelled from their paternal abode, they ſometimes ſurvive; for if they be ſomewhat grown, if the neſt be near the ground, and if the aſpect is favourable and the ſeaſon mild, they find ſhelter under the moſs or foliage, and the parents, without forſaking the intruder, continue to feed and watch them.

All the inhabitants of foreſts aſſert, that when the female Cuckoo has once depoſited her egg in the neſt which ſhe has ſelected, ſhe retires to a diſtance, and ſeems to forget her progeny; and that the male never diſcovers the ſmalleſt concern in the matter. But M. Lottinger has obſerved that, though the parent Cuckoos do not viſit their offspring, they approach within a certain diſtance of the ſpot, calling, and ſeem to liſten and reply to each other. He adds that the young Cuckoo conſtantly anſwers to the call, whether in the woods or in a volery, provided it be not diſturbed by the ſight of a perſon. It is certain that the old

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ones can be enticed by imitating their call, and that they ſometimes chant in the vicinity of the neſt; but there is no proof that theſe are the parents of the young bird. They never render thoſe tender offices which mark parental attachment, and their calls proceed only from the ſympathy common between birds of the ſame ſpecies.

Every body knows the ordinary ſong of the Cuckoo *; it is ſo diſtinctly formed, and ſo often repeated, that, in almoſt all languages, it has given name to the bird. It belongs excluſively to the male, and is heard only during the ſpring, the ſeaſon of love, and either when he ſits on a dry branch, or while he moves on the wing: ſometimes it is interrupted by a dull rattling ſound, *crou, crou*, uttered with a hoarſe liſping voice. There is alſo another occaſional cry, which is loud but rather quavering, and compoſed of ſeveral notes, like that of the little diver: it is heard when the male and female purſue each other in amorous frolic †. Some have alſo ſuſpected it to be the cry of the female. When ſhe is animated ſhe has beſides a

* *Cou cou, cou cou, cou cou cou, tou cou cou (ou,* in French, pronounced *oo).* This frequent repetition has given riſe to two modes of proverbial expreſſions: when a perſon dwells upon the ſame ſubject, he is ſaid in German *to ſing the Cuckoo's ſong.* The ſame phraſe is applied to a ſmall body of people, who, by their tumultuary vociferation, ſeem to form a numerous aſſembly.

† Thoſe who have heard it expreſs it thus; *go, go, guet, guet, guet.*

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ſort of clucking, *glou, glou*, which is repeated five or ſix times with a ſtrong clear voice, while ſhe flies from tree to tree. This would ſeem intended to incite the male; for as ſoon as he hears the call he haſtens to her with ardour, uttering *tóu, cou, cou* *. But notwithſtanding this variety of inflection, the ſong of the Cuckoo ought never to be compared with that of the nightingale, except in the fable †. It is very uncertain whether theſe birds ever pair; they are ſtimulated by appetite, but they ſhew nothing like ſentiment or attachment. The males are much more numerous than the females, and often contend for them ‡; yet the object of the ſtruggle is a female in general, without any ſymptom of choice or predilection; and when their paſſion is ſatisfied, they deſert her with the coldeſt indifference. They diſcover no ſolicitude, and make no proviſion, for their offſpring. The mutual attachment between pa-

* Note communicated by the Count de Riollet, who makes a laudable amuſement of obſerving what ſo many others only look at.

† It is ſaid that the nightingale and the Cuckoo diſputed the merits of the ſong in preſence of the aſs, which adjudged the prize to the Cuckoo; but that the nightingale appealed to man, who pronounced in its favour, ſince which time the nightingale ſings as ſoon as it ſees a man, in gratitude for his deciſion, or in juſtification of it.

‡ Seldom or never do perſons kill or take any but the ſinging Cuckoos, and, by conſequence, the males. I have ſeen three or four killed in a ſingle excurſion, and not one female among them. "In a trap, which we placed on a tree frequented by Cuckoos," ſays the author of the Britiſh Zoology, "we caught not fewer than five male birds in one ſeaſon."

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rents is founded on the common tenderneſs to their young.

The young Cuckoos, ſoon after their excluſion, have alſo a call not ſhriller than that of the pettychaps and red-breaſts, their nurſes, whoſe tone they aſſume from the force of imitation *: and as if ſenſible of the neceſſity of ſoliciting and importuning an adoptive mother, who cannot have the compaſſion of a real parent, they continually repeat their entreaty; and, to remove ambiguity, their broad bill is opened to its utmoſt width, and the expreſſion is rendered ſtill more ſignificant by the clapping of their wings. After their wings have acquired ſome ſtrength, they purſue their nurſe among the neighbouring branches, or meet her when ſhe brings food. The young Cuckoos are voracious †, and can hardly be maintained by little birds, ſuch as the red-breaſt, the pettychaps, the common and yellow wrens, which have beſides a family to ſupport. They retain their call, ac-

* "The ſingular ſtructure of their noſtrils contributes perhaps," ſays M. Friſch, "to produce this ſharp cry." It is true that the noſtrils of the Cuckoo have, with regard to their exterior, a pretty ſingular ſtructure; but I am convinced that they contribute not in the leaſt to modify this cry, which continued the ſame after I had ſtopt the noſtrils with wax. I have diſcovered, by repeating this experiment upon other birds, and particularly upon the wren, that the cry remains unvaried, whether the noſtrils be ſhut or left open. It is beſides known that the voice of birds is formed not in the noſtrils, or at the *glottis*, but at the lower part of the *trachea arteria*, near its forking.

† Hence the proverb *to ſwallow like a Cuckoo.*

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cording to Friſch, till the fifteenth or twentieth of September; it then begins to grow flat, and is ſoon loſt entirely.

Moſt ornithologiſts agree, that inſects are the chief part of the Cuckoo's food, and that, as I have already remarked, it is peculiarly fond of birds' eggs. Ray found caterpillars in its ſtomach; I have alſo perceived veſtiges of vegetable ſubſtances, ſmall beetles, &c. and ſometimes pebbles. Friſch aſſerts that the young Cuckoos ought, in every ſeaſon, to be fed in the morning and evening at the ſame time as in the longeſt days of ſummer. That author has alſo obſerved the way in which they eat the inſects alive: they lay hold of the caterpillar by the head, and, drawing it into their bill, they ſqueeze the juicy matter through the anus, and then ſhake it ſeveral times before they ſwallow it. They alſo ſeize butterflies by the head, and, preſſing with their bill, they cruſh the breaſt, and ſwallow the whole together with the wings. They likewiſe eat worms; but they prefer ſuch as are alive. When inſects could not be had, Friſch gave a young Cuckoo which he raiſed, ſheep's liver, and eſpecially kidneys, cutting them into ſmall ſtrips like the inſects for which they were ſubſtituted. When theſe were too dry, he ſoaked them a little, that they might be eaſily ſwallowed. The bird never drank unleſs its food was too dry, and then it drank awkwardly and with reluctance.

In every other caſe it rejected water, and ſhook off the drops which were forcibly or artfully introduced into its bill*; in ſhort, it is habitually under the impreſſion of a hydrophobia.

The young Cuckoos never ſing during their firſt year, and the old ones ceaſe towards the end of June, at leaſt their ſong is then unfrequent. But this ſilence does not announce their departure; they are found in the open country until the end of September, and even later †. It is the ſcarcity of inſects, no doubt, which determines them to retire to warmer climates: they migrate for the moſt part into Africa, ſince the Commanders of Godeheu and des Mazys reckon them among thoſe birds which are ſeen twice a year paſſing and repaſſing the iſland of Malta ‡. On their arrival in our climates they approach neareſt our dwellings; during the reſt of their ſtay they fly about among the woods, the meadows, &c. and wherever they can diſcover neſts to plunder or depoſit their egg, or find inſects and fruits. Towards autumn the adults, and eſpecially the females, are excellent food, and as fat as they were lean in the

* I have remarked this fact, as well as the Carthuſian of Salerne. May not this be the reaſon why a decoction of the Cuckoo's dung in wine has been recommended as a ſure remedy for the hydrophobia?

† Querhoent and Hebert.

‡ Salerne relates, from Voyagers, that the Cuckoos ſometimes alight in great numbers on ſhips.

ſpring *. Their fat is collected chiefly under the neck †, and is the moſt delicate morſel of the bird. They are commonly ſingle ‡, reſtleſs, and perpetually changing their place; and though they never fly to any great diſtance, they range over a conſiderable tract during the courſe of the day. The ancients watched the times of the appearance and diſappearance of the Cuckoo in Italy. The vine-dreſſers who had not lopped their vines before its arrival were reckoned lazy, and held the object of public deriſion. The by-paſſers who ſaw the backward ſtate of the vineyard, mocked the owner's indolence by repeating the call of that bird, which was itſelf, and with much propriety, regarded as the emblem of ſloth, ſince it diſpenſes with the ſacred obligations of nature. It was an uſual expreſſion alſo, *crafty as a Cuckoo* (for cunning and indolence may ſubſiſt together);

* It is in this ſeaſon only that the proverb, *lean as a Cuckoo*, is juſt.

† I obſerved the ſame thing in a young rock ouzel, which I brought up, and which died in the month of October.

‡ In the month of July were a dozen Cuckoos on a large oak; ſome ſcreamed with all their might, others were ſilent; a fowling-piece was diſcharged at them, and one dropt, which was a young one. This would give room to ſuppoſe that the old and young gather together in ſmall bodies, to migrate.

Note communicated by M. le Comte de Riollet.

* *Inde natam exprobationem fœdam putantium vites per imitationem cantus alitis temporarii quem cuculum vocant; dedecus enim habetur . . falcem ab illâ volucre in vite deprehendi, ut ob id petulantiæ ſales etiam cum primo vere ludantur.* Pliny, *Lib. XVII.* 26.

either

either becauſe, declining the taſk itſelf, it contrives to make other birds hatch its eggs; or for another reaſon furniſhed by the ancient mythology *.

Though ſubtle, though ſolitary, the Cuckoos are ſuſceptible of a ſort of education. Many perſons of my acquaintance have reared and tamed them; they are fed with minced meat, either cooked or raw, with inſects, eggs, ſoaked bread, fruits, &c. One of the Cuckoos thus bred knew its maſter, anſwered his call, followed him to the ſport, perched on his fowling-piece, and if it found a black cherry tree on the road, it flew to it, and returned not till ſatiated with the fruit; ſometimes it did not join its maſter again the whole day, but followed him at a diſtance, ſhifting from tree to tree: when at home it was permitted to run about, and to rooſt at night. The dung of this bird is white and abundant, which is a great inconvenience in its education; it muſt be carefully guarded againſt the cold during the tranſition of autumn into winter: this is a critical period for the Cuckoo; at leaſt I loſt at this time all thoſe

* Jupiter having perceived that his ſiſter Juno was alone on the Dictean mount, or Thronax, raiſed a violent ſtorm, and came in ſhape of a Cuckoo, and alighted on the knees of the goddeſs, who ſeeing it drenched and beaten by the tempeſt, pitied it, and cheriſhed it under her robe: the god then reſumed his proper form, and became the huſband of his ſiſter. From that moment the Dictean mount was called *Coccygian*, or *Cuckoo-mountain*; and hence the origin of the *Jupiter-cuculus*. *See* Geſner, p. 368.

which I tried to rear, and indeed many of other kinds.

Oliña ſays that the Cuckoo may be trained for the chaſe like the ſparrow-hawks and the falcons; but he is the only perſon who makes that aſſertion, which, perhaps, as well as many other errors in the hiſtory of this bird, has its ſource in the reſemblance of its plumage to that of the ſparrow-hawk.

The Cuckoos are generally diffuſed in the ancient continent; and though thoſe of America have different habits, many of them ſtill retain a certain family likeneſs. The common kind appear only during ſummer in the colder temperate climates, ſuch as thoſe of Europe; and they reſide in the winter only in the warmer countries, ſuch as thoſe of the north of Africa: they ſeem to ſhun both extremes alike.

When the Cuckoos alight on the ground, they hop, as I have remarked; but this ſeldom happens: and even though it were not aſcertained by experience, we might infer it from the ſhortneſs of their legs and thighs. A young Cuckoo, which I had occaſion to obſerve in the month of June, made no uſe of its legs in walking, but crept on its belly, aſſiſting its motion by means of its bill, like the parrot in climbing. When it clambered in its cage, I perceived that the largeſt of the hind toes was turned forwards, but was leſs uſed than the two

other

other anterior ones *. It aſſiſted its progreſſive motion by flapping its wings.

I have already ſaid that the plumage of the Cuckoo is very ſubject to vary in different individuals; and conſequently, in deſcribing the bird, we can do nothing more than give an idea of the colours and their diſtribution, ſuch as they are moſt commonly obſerved. The greater number of the full-grown males, which were brought to me, reſembled much the one deſcribed by Briſſon; in all of them, the upper-ſide of the head and body, including the coverts of the tail, the ſmall coverts of the wings, the great ones next the back, and the three quills covered by them, are of a fine aſh-colour; the great coverts of the middle of the wing are brown, ſpotted with rufous, and terminated with white; the moſt remote on the back, and the ten firſt quills of the wing are deep cinereous, the inſide of the latter being ſpotted with ruſty white; the ſix contiguous quills brown, and marked, on both ſurfaces, with rufous ſpots, terminated with white; the throat and the fore-part of the neck are light cinereous; the reſt of the underſide of the body is radiated tranſverſely with brown, on a dirty white ground; the fea-

* If this habit be common to the ſpecies, what becomes of the expreſſion, *digiti ſcanſorii*, applied by many naturaliſts to the toes diſpoſed, as in the Cuckoo, two before and two behind? Beſides, do not the nut-hatches, the titmice, and the creepers, excel in climbing, though their toes are placed in the ordinary way, three before and one behind?

thers of the thighs the ſame, and falling on each ſide on the tarſus, like ruffles; the tarſus clothed exteriorly with aſh-coloured feathers as far as the middle; the quills of the tail blackiſh, and terminated with white; the eight intermediate ones are ſpotted with white near the ſhaft on the inſide; the two middle ones are ſpotted in the ſame manner on the outer edge, and the laſt of the lateral quills is barred tranſverſely with the ſame colour; the iris is cheſnut, ſometimes yellow; the internal membrane of the eye is very tranſparent; the bill is black without, and yellow within; the corners of the bill are orange; the legs yellow, and a little yellow appears alſo at the baſe of the lower mandible.

I have ſeen ſeveral females which were very like the males; and in ſome I perceived, on the ſides of the neck, traces of thoſe brown ſtreaks mentioned by Linnæus.

Dr. Derham ſays, that, in females, the neck is variegated with ruſty, and the upperſide of the body is of a darker caſt *; that the wings alſo are of a ruſty hue, and the eyes not ſo yellow. According to other obſervers, the plum-

* A perſon of veracity aſſured me that he ſaw ſome of theſe individuals of a browner caſt, which were alſo larger: if they were females, this would be another point of analogy to the rapacious birds. On the other hand, Friſch remarks, that of two young Cuckoos of different ſexes, which he raiſed, the male was the browneſt.

age

age of the male is always darker than that of the female; but the variation is ſo great, that no certain diſcrimination can be drawn.

In young Cuckoos, the bill, the legs, the tail, and the underſide of the body, are nearly the ſame as in the adults, except that the quills are more or leſs retained in their tubes: the throat, the forepart of the neck, and the underſide of the body, are barred with white and blackiſh; in ſuch manner, however, that the blackiſh predominates on the anterior parts more than on the poſterior (in ſome ſubjects there is hardly any white under the throat); the upperſide of the head and body is beautifully variegated with blackiſh, white, and ruſty, diſtributed ſo that the ruſty appears more on the middle of the body, and the white on the extremities; there is a white ſpot behind the head, and ſometimes above the face; all the quills of the wings are brown tipped with white, and ſpotted more or leſs with ruſty and white; the iris is greeniſh gray, and the ground of the plumage is a very light aſh colour. It is probable that the female ſo handſomely *mottled*, of which Salerne ſpeaks, was hatched the ſame year. Friſch tell us, that young Cuckoos reared in the woods have a plumage leſs variegated, and more like the plumage of thoſe which are bred in the houſe. If this be not the caſe, we ſhould at leaſt expect it; for domeſtication in general alters the colours of animals, and we

might preſume that thoſe ſpecies of birds which participate of that ſtate, undergo a proportional change of colours. At the ſame time I muſt own, that I could perceive no difference between the young wild Cuckoos which I have ſeen (and I have ſeen many of them) and thoſe which I reared. Perhaps what Friſch examined were older than the domeſtic ones with which he compared them. The ſame author adds that the young males have a darker plumage than the females, and that the inſide of their mouth is redder, and their neck thicker *.

The weight of a full grown Cuckoo, weighed on the 12th of April, was four ounces two gros and a half; that of another, on the 17th of Auguſt, was about five ounces. But they are heavier in the autumn, being then much fatter, and the difference is not inconſiderable. I weighed a young one on the 22d of July, whoſe total length was near nine inches, and found it two ounces two gros; another almoſt as large, though much leaner, was only one ounce four gros, that is near one third leſs than the firſt.

In the full grown male the inteſtinal tube is about twenty inches; there are two *cæca* of unequal length, the one fourteen lines (ſometimes

* Friſch ſuſpects that the thickneſs of the throat, which is peculiar to the male, may have ſome relation to the cry of the males. Yet I muſt obſerve that, in the numerous diſſections which I have made, I could not perceive that the organs of voice were larger in the males than in the females.

twenty-

twenty-four), the other ten (ſometimes eighteen), both directed forwards, and adhering all along to the great inteſtine, by means of a thin tranſparent membrane; there is a gall bladder; the kidnies are placed on each ſide of the ſpine, divided into three principal lobes, and theſe ſubdivided into others ſmaller, ſecreting a whitiſh liquor; the two teſticles are of an oval ſhape, and of unequal ſize, attached to the upper part of the kidnies, and ſeparated by a membrane.

The œſophagus dilates, at its lower part, into a ſort of glandular ſac, parted from the ſtomach by a contraction; the ſtomach is ſlightly muſcular on its circumference, membranous on its middle, and adhering by means of fibrous network to the muſcles of the lower belly, and to the different parts which ſurround it. It is beſides much ſmaller and better proportioned in a young bird reared by a red-breaſt or pettychaps than in one bred and tamed by man; in the latter, the ſtomach, being diſtended by exceſſive feeding, is as large as a common hen's egg, and occupies all the anterior part of the cavity of the belly, from the ſternum to the anus, and ſometimes ſtretches under the ſternum five or ſix lines *, and, at other times, it conceals the

* *See* Mémoires de l'Academie Royale des Sciences, *année*, 1752, *p.* 420. The Cuckoo of M. Heriſſant was domeſtic, to judge by the quantity of fleſh with which its ſtomach was filled. In the nutcracker the ſtomach is alſo very bulky, ſituated likewiſe in the middle of the belly, and not covered by the inteſtines.

whole of the inteſtines; whereas in the wild Cuckoo, which I directed to be killed the inſtant they were brought to me, it never extended quite to the ſternum, but left uncovered, between its lower part and the anus, two circumvolutions of the inteſtines, and three on the right ſide of the abdomen. I ſhould add, that in moſt of the birds which I diſſected, nothing was required to be compreſſed or diſplaced in order to perceive one or two circumvolutions of inteſtines in the cavity of the belly on the right ſide of the ſtomach, and one between the lower part of the ſtomach and the anus. This difference of conformation, therefore, conſiſts but in degree, ſince, in the greater number of the winged tribes, not only is the poſterior ſurface of the ſtomach ſeparated from the ſpine by a portion of the inteſtinal tube which is interpoſed, but the left ſide is never covered by any portion of theſe inteſtines; and this ſingle difference is far from proving that the Cuckoo is incapable of hatching, as an ornithologiſt alleges. It is not, probably, becauſe the ſtomach is too hard, ſince the ſides being membranous, its tenſeneſs proceeds from accident or repletion; nor is the reaſon becauſe the bird avoids cooling its ſtomach, which is leſs ſhielded than that of other birds; for it is evident, that it would be much leſs liable to be affected by cold, if employed hatching than in fluttering and perching on trees, The nut-hatch has the ſame ſtructure, and yet

it

it ſits. Beſides, not only the ſtomach, but the whole of the lower part of the body, reſts upon the eggs, otherwiſe moſt birds which, like the Cuckoo, have a long ſternum, could not cover above three or four at once, which falls much ſhort of the uſual number.

I found in the ſtomach of a young Cuckoo, which I reared, a lump of raw fleſh almoſt dry, and which had not paſſed through the *pylorus*; it was decompoſed, or rather divided into exceedingly fine *fibrillæ*. In another, which was picked up dead in the woods about the beginning of Auguſt, the internal membrane of the ventricle was hairy, the briſtles being about a line in length, and directed towards the orifice of the *œſophagus*: in general, one meets with very few pebbles in the ſtomach of young Cuckoos, and there are hardly any which have not ſome veſtige of vegetable matter in their ſtomach. Perhaps theſe have been bred by the greenfinches, the larks, and other birds, which neſtle on the ground; the ſternum forms a re-entrant angle.

Total length thirteen or fourteen inches; the bill thirteen lines and a half; the edges of the upper mandible ſcolloped near the point (but not in all the young ones); the noſtrils elliptical, encircled by a projecting margin, and in the centre there is a ſmall whitiſh ſpeck which riſes almoſt as high as the margin; the tongue is white at the point, and not forked; the tarſus ten lines; the thigh leſs than twelve; the

inner

inner one of the hind nails is the weakeſt and the leaſt hooked; the two fore toes are connected together at their baſe by a membrane; the under ſide is of a very fine texture, like ſhagreen; the alar extent about two feet; the tail is ſeven inches and a half, conſiſting of ten tapered quills *, and exceeding the wings by two inches [A].

VARIETIES of the CUCKOO.

It might be regarded as ſingular that the figure and aſpect of a bird, which lives in the ſtate of nature, ſhould be ſo inconſtant and variable. But as the Cuckoos never pair, they are ſtimulated only by vague and general appetite unreſtrained by perſonal attachment, and contract irregular alliances; which has given riſe to diverſity in the bulk, in the ſhape, and in the plumage, and which, in the opinion of many, has converted them into falcons, merlins, gos-hawks, ſparrow-hawks, &c. But, not to enter into a detail of theſe exhauſtleſs varieties, which appear to fluctuate, I ſhall only

* Ray reckons only eight in one which he obſerved in 1693; but aſſuredly two were wanting.

[A] Specific character of the *Cuculus Canorus:* "Its tail is rounded, blackiſh, and dotted with white." In England it arrives about the middle of April, and retires in the end of July; its appearance is a month later in the cold climate of Sweden. Its retreat is abſolutely unknown.

obſerve

obſerve that in Europe Cuckoos are found differing greatly in ſize; that the colours, aſh-gray, rufous, brown, and whitiſh, are diſtributed differently in different individuals, ſo that each of theſe predominates more or leſs, and, by the multiplicity of their ſhades, increaſes the variations of the plumage. With regard to the foreign Cuckoos, I find two which ſeem to be varieties of the European kind, occaſioned by the influence of climate; and perhaps I ſhould add ſeveral others, if I had an opportunity of ſurveying them more cloſely.

I. The Cuckoo from the Cape of Good Hope* reſembles that of Europe both in its proportions and in the tranſverſe bars below the belly, and in its ſize, which is not much ſmaller.

The upper ſide of the body is brown green; the throat, the cheeks, the fore part of the neck, and the ſuperior coverts of the wings, are deep rufous; the quills of the tail are of a lighter rufous, terminated with white; the breaſt, and all the reſt of the under ſide of the body, are barred tranſverſely with black on a white ground; the iris is yellow; the bill deep brown; and the legs reddiſh brown. The total length is ſomewhat leſs than twelve inches.

May not this be the bird known at the Cape of Good Hope under the name of *edolio*, be-

* *Cuculus Capenſis*, Gmel.
The *Cape Cuckoo*, Lath.

cauſe

cauſe it repeats that word in a low melancholy tone? It has no other ſong, and many inhabitants of that country, not Hottentots but Europeans, believe that the ſoul of a certain ſhip-maſter, who often pronounced the ſame word, entered into the body of this bird; for modern ages have alſo their metamorphoſes. This is no doubt as true as the ſtory of *Jupiter cuculus*, and yet we probably owe to it our knowledge of the bird's cry. It were fortunate if every error conveyed ſome truth.

II. Travellers ſpeak of a Cuckoo of the kingdom of Loango in Africa, which is rather larger than ours, but having the ſame colours, and differing chiefly in its ſong; this muſt be underſtood of its tone, for it pronounces *cuckoo* as ours does. The cock begins, it is ſaid, with ſounding the gamut, and ſings alone the three firſt notes; then the hen ſtrikes in, and accompanies him through the reſt of the octave. She differs from our female Cuckoo, which calls much leſs than the male, and in a different manner. This is ſtill another reaſon for diſtinguiſhing the Loango Cuckoo from our ſpecies, and conſidering it as a variety.

The FOREIGN CUCKOOS.

THE principal characters of the European Cuckoo are, as we have ſeen, a large head, a broad wide bill, the toes placed two before and two behind, the legs feathered and ſhort, the thighs ſtill ſhorter, the nails ſlender and ſlightly hooked, the tail long and conſiſting of ten tapered quills. It is diſcriminated from the curucuis by the number of tail-quills, theſe being twelve, and particularly by the greater length of its bill, and the greater convexity of its upper mandible: it is alſo diſtinguiſhed from the barbus, by having no briſtles round the baſe of the bill. But the whole muſt be received with a degree of latitude, nor muſt we expect to find all the characters exactly combined in each bird that ought to be claſſed with the Cuckoo of Europe. The various tribes of animals melt into each other, and no abſolute limits can be aſſigned. It is enough if the birds which we ſhall refer to the genus of the Cuckoos be more cloſely related to it than to any other genus. Our object is to trace nature as ſhe actually exiſts, not to form artificial arrangements; and to facilitate the progreſs of knowledge, by condenſing and abridging the detail of facts, which ſerves as the foundation. Among the foreign Cuckoos, therefore,

therefore, we ſhall meet with ſome ſpecies that have even tails, as the ſpotted Cuckoo of China, that of the iſland of Pannay, the vouroudriou of Madagaſcar, and a variety of the brown Cuckoo ſpotted with rufous, from the Eaſt Indies; with ſome, that are in ſome degree forked, ſuch as the Cuckoo which has two long ſhafts inſtead of the two outer quills; with others, which have the tail exceedingly tapered, like the widow birds, ſuch as the ſanhia of China, and the creſted collared Cuckoo; with others, wherein it is only partly tapered, as the old-man with rufous wings from Carolina, which has only two pairs of quills tapered, and as a variety of the creſted jacobine from Coromandel, which has only the outer pair tapered, that is, ſhorter than the four other pairs, which are equal to each other in length; with others, which have twelve quills in the tail, ſuch as the honey-guide of the Cape; with others, which have only eight, as the guiracantara of Braſil, if Marcgrave was not deceived in counting them; with others, which ſpread their tail even when in a ſtate of repoſe, as the Madagaſcar coua, the gold-green and white Cuckoo of the Cape of Good Hope, and the ſecond coukeel of Mindanao; with others, which have all the quills cloſe and imbricated, both the middle and lateral ones; with others, which have ſome hairs about the bill, as the ſanhia, the honey-guide, and a variety of the greeniſh

Cuckoo of Madagaſcar; with others, which have a proportionally longer and ſlenderer bill, as the tocco of Cayenne; with others, wherein the internal and poſterior toe is armed with a long ſpur, like that of our larks, as the houhou of Egypt, the Cuckoo of the Philippines, the green Cuckoo of Antigua, the toulou and the ruſty-white; and laſtly, with others, wherein the legs are more or leſs ſhort, more or leſs feathered, or even without any feather or down. Even what is regarded as the moſt fixed and certain character, I mean the diſpoſition of the toes, two placed before and two behind, is alſo liable to vary; ſince I have obſerved, in the Cuckoo, that one of the hind toes ſometimes turns forwards, and others have found, in the owls, that one of the anterior toes ſometimes turns backwards; but theſe ſlight differences, far from confounding the genus of the Cuckoos, diſplay the true order of nature; as they ſhew the richneſs of her plans, and the eaſe with which they are executed; exhibiting the endleſs variety of ſhades, the infinite diverſity of features which diſtinguiſh the individual, and yet without obliterating the general family likeneſs.

It is a remarkable circumſtance with regard to the tribe of Cuckoos, that the branch ſettled in the new world ſeems leſs ſubject to the variations which I have mentioned, and retains a greater reſemblance to the European ſpecies

conſidered as the common trunk, and from which it was perhaps later ſeparated. In fact, the European Cuckoo viſits the northern countries, and puſhes its excurſions as far as Denmark and Norway, and conſequently might croſs the narrow ſtraits which divide the continents at theſe high latitudes: but it could much more eaſily paſs the iſthmus of Suez, or ſome narrow inlets, to ſpread through Africa; and nothing could oppoſe or retard its progreſs into Aſia. In theſe countries, therefore, the ſettlement muſt have been more early, and a greater deviation from the primitive ſtock may be expected. Accordingly, though there are ſcarcely two or three exceptions or exterior anomalies in fifteen ſpecies or varieties found in America, there are fifteen or twenty in thirty-four ſpecies that occur in Aſia and in Africa; and no doubt there are more, if all the Cuckoos were known, which is ſo far from being the caſe, that it is ſtill undecided whether, among ſo many, there be one that drops its eggs in the neſts of other birds; we know only that many of theſe foreign kinds build their neſt, and hatch their own eggs. But though we are commonly acquainted with the ſuperficial differences only, ſome general and radical ones muſt obtain, eſpecially between the two branches ſettled in the old and in the new world, which muſt undoubtedly receive an impreſſion from the climate. I have noticed that the American

ſpecies

ſpecies are in general ſmaller than thoſe of the old continent, probably owing to the ſame cauſes which check the growth and expanſion of quadrupeds in the new world, whether thoſe be indigenous, or introduced. There are at moſt two ſpecies of Cuckoos in America of nearly the ſame ſize with ours; but the others exceed not our blackbirds and thruſhes. In Africa and Aſia, there are a dozen ſpecies as large as the European, or larger, and ſome of them equal to hens in bulk.

This ſtatement will I hope juſtify the plan which I have adopted, of ſeparating the Cuckoos of America from thoſe of Aſia and Africa. Time and obſervation, the two great ſources of information, are ſtill wanting to illuſtrate the habits and economy of theſe birds, and to point out their true differences, external or internal, general or particular.

BIRDS
OF THE OLD CONTINENT,
WHICH ARE RELATED TO THE CUCKOO.

I.
The Great SPOTTED CUCKOO.

Cuculus Glandarius, Linn. Gmel. and Bor.
Cuculus Andaluſiæ, Briſſ.

I BEGIN with this Cuckoo, which is not entirely foreign to Europe, ſince one was killed on the rock of Gibraltar. It would ſeem to be migratory, wintering in Aſia or in Africa, and appearing ſometimes in the ſouth of Europe. Both this and the following ſpecies may be conſidered as intermediate between the common and the foreign kinds: it differs, however, from the common not only by its ſize and plumage, but by its proportions.

The moſt remarkable ornament of this Cuckoo is a ſilky tuft of a bluiſh gray, which can be erected at pleaſure, but in the ordinary ſtate lies flat on the head; there is a black bar on the eyes, which gives it a marked aſpect; brown predominates on all the upper parts, including the wings and the tail, but the middle quills, and almoſt all the coverts of the wings, the four

four lateral pairs of the tail, and their ſuperior coverts, are terminated with white, which forms a pleaſant enāmel; all the under ſurface of the body is brown orange, which is pretty bright on the anterior parts, and duller on the poſterior; the bill and legs are black.

It is as large as a magpie; the bill fifteen or ſixteen lines; the legs ſhort; the wings not ſo long as in the ordinary Cuckoo; the tail about eight inches, conſiſting of ten tapered quills, and exceeding the wings about four inches and a half[A].

II.

The BLACK and WHITE CRESTED CUCKOO.

Cuculus Piſanus, Gmel.
Cuculus ex nigro et albo mixtus, Gerini.
The *Piſan Cuckoo*, Lath.

THIS Cuckoo likewiſe muſt be regarded as only half foreign, ſince it was ſeen once in Europe. The authors of the Italian Ornithology inform us that in 1739 a male and female of this ſpecies neſtled in the vicinity of Piſa, and that the hen laid four eggs, which

[A] Specific character of the *Cuculus Glandarius*: "Its tail is wedge-ſhaped, its head ſomewhat creſted, with a black bar on its eyes."

ſhe hatched, &c *. It muſt, therefore, be very different from the ordinary Cuckoo, which undoubtedly never recur to incubation in our climates.

The head is black, and ornamented with a tuft of the ſame colour, which lies backwards; all the upper ſide of the body, including the ſuperior coverts, is black and white; the great quills of the wings rufous, terminated with white; the quills of the tail are blackiſh, terminated with light rufous; the throat and breaſt are rufous; the inferior coverts of the tail are ruſty; the reſt of the under ſide of the body white, and even the feathers on the lower part of the thigh, which deſcend to the tarſus; the bill is greeniſh-brown, and the legs green.

This Cuckoo is rather larger than the ordinary kind, and its tail is proportionally longer; its wings are alſo longer, and its tail more tapered than in the Great Spotted Cuckoo, which it reſembles in other reſpects [A].

* Theſe authors ſay expreſsly that neither before nor ſince that time have theſe birds been ſeen in the neighbourhood of Piſa.

[A] Specific character of the *Cuculus Piſanus:* "Its tail is wedge-ſhaped; its body variegated with black and white above, and white below; its head creſted with black; its throat and breaſt, rufous."

III.

The GREENISH CUCKOO of MADAGASCAR.

Cuculus Madagaſcarienſis, Gmel.
The *Great Madagaſcar Cuckow*, Lath.

THIS Cuckoo is chiefly diſtinguiſhed by its magnitude: all the upper ſide of the body is deep olive, variegated with waves of a darker brown; ſome of the lateral quills of the tail are terminated with white; the throat is light olive, ſhaded with yellow; the breaſt, and the top of the belly, fulvous; the lower belly brown, and alſo the inferior coverts of the tail; the thighs are of a gray wine colour; the iris orange; the bill black; the legs yellowiſh brown; the tarſus not feathered.

Total length twenty-one inches and a half; the bill twenty-one or twenty-two lines; the tail ten inches, and compoſed of ten tapered quills, and extending more than eight inches beyond the wings, which are not long [A].

I find a note of Commerſon on a Cuckoo from the ſame country, and very ſimilar to the preſent:—I ſhall only remark the differences.

It is nearly as large as a hen, and weighs thir-

[A] Specific character of the *Cuculus Madagaſcarienſis*: "It is olive, waved with brown; below fulvous; the throat olive, diluted with yellow."

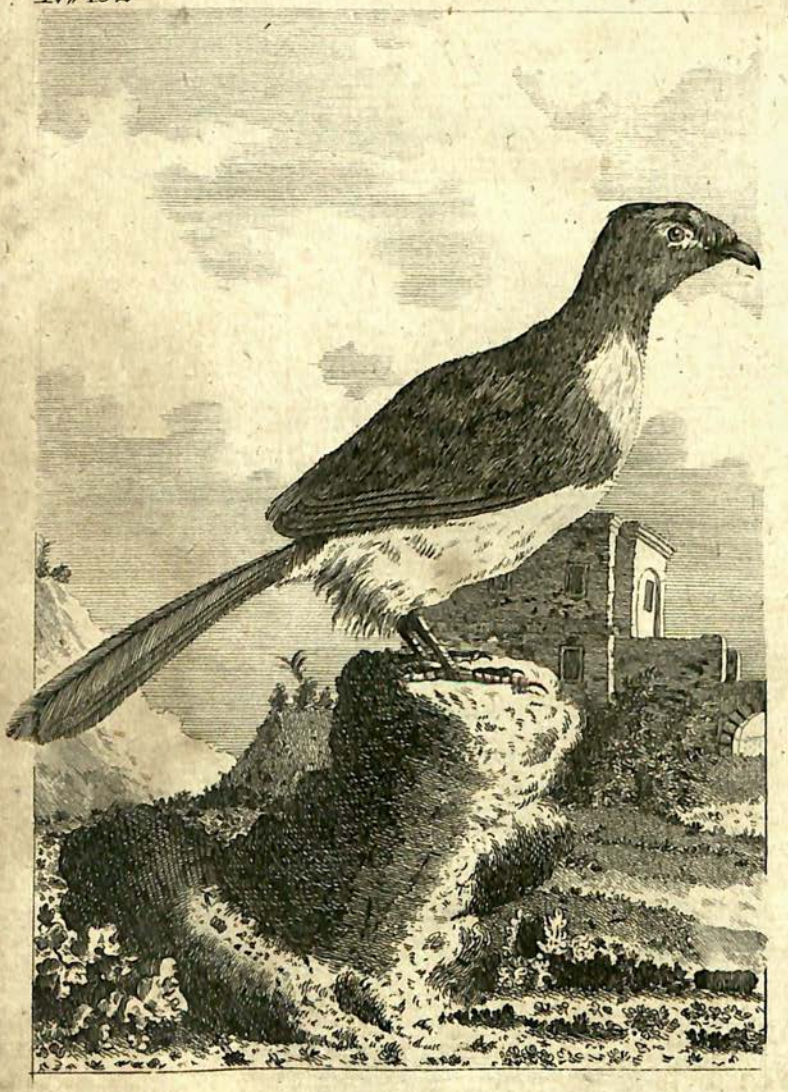
teen ounces and a half; on the head there is a naked ſpace, furrowed ſlightly, tinged with blue, and encircled by fine black feathers; thoſe of the head and neck are ſoft and ſilky; there are ſome briſtles around the baſe of the bill, whoſe inſide is black; the tongue is alſo black and forked; the iris reddiſh; the thighs and the inſide of the wing-quills blackiſh; the legs black.

Total length twenty-one inches and three quarters; the bill nineteen lines, its edges ſharp; the noſtrils like thoſe of the gallinaceous tribe; the outer of the two hind toes can turn backwards or forwards (as I have obſerved in the European Cuckoo); the alar extent twenty-one inches, and each wing contains eighteen quills.

All that Commerſon ſays with regard to the habits of this bird is, that it aſſociates with the other Cuckoos. It would appear to be a variety of the greeniſh Cuckoo; perhaps it differs only in ſex, in which caſe I ſhould reckon it the male.

ASIATIC SOC

N.° 152



THE MADAGASCAR CRESTED CUCKOO.

IV.

The COUA.

Cuculus Criſtatus, Linn. and Gmel.
Cuculus Madagaſcarienſis Criſtatus, Briſſ. and Ger.
The *Madagaſcar Creſted Cuckoo*, Lath.

I RETAIN the name given by the inhabitants of Madagaſcar, becauſe it certainly denotes the bird's call. It has a tuft which reclines back, whoſe feathers, and alſo thoſe of the reſt of the head and of all the upper ſide of the body, are greeniſh cinereous; the throat and fore-part of the neck are cinereous; the breaſt red wine colour; the reſt of the under ſide of the body whitiſh; the legs barred almoſt imperceptibly with cinereous; what appears of the quills of the tail and of the wings is light green, changing into blue and ſhining violet, but the lateral quills of the tail are terminated with white; the iris is orange; the bill and legs black; it is rather larger than the ordinary Cuckoo, and is differently proportioned.

Total length fourteen inches; the bill thirteen lines; the tarſus nineteen lines; and the toes are alſo longer than in our Cuckoo; the alar extent is ſeventeen inches; the tail is ſeven inches, conſiſting of quills that are a little tapered, and exceeds the wings ſix inches.

Commerſon made this deſcription in the month

month of November, from the living ſubject, and in its native climate; he adds that its tail diverges, or rather expands, that its throat is ſhort, its noſtrils oblique and uncovered, that its tongue terminates in a cartailginous tip; its cheeks naked, wrinkled, and bluiſh.

The fleſh is excellent. The bird is found in the woods near Fort Dauphin [A].

V.

The HOUHOU of EGYPT.

Cuculus Ægyptius, Gmel.
The *Egyptian Cuckoo*, Lath.

THIS Cuckoo has named itſelf; for its cry, *hou, hou*, is repeated ſeveral times ſucceſſively, in a hollow tone. It is ſeen frequently in the Delta; the male and female ſeldom ſeparate from each other; but it is more rare to find ſeveral pairs collected together. They are *acridophagites* * in the full ſenſe of the word; for they ſeem to ſubſiſt moſtly, if not entirely, on graſs-hoppers. They never alight on large trees, and far leſs on the ground; but perch on buſhes near ſome brook. They have two un-

[A] Specific character of the *Cuculus Criſtatus*: "Its tail is rounded; its head creſted; its body of a gloſſy greeniſh aſh-colour."

* i. e. *locuſt-eaters*, from ακρίδες, *locuſtæ*.

common

common characters: the firſt is, that all the feathers which cover the head and neck are thick and hard, while thoſe on the belly are ſoft and looſe; the ſecond is, that the nail of the inner hind toe is long and ſtraight, like that of the lark.

In the female (for I have no certain account of the male) the head and upper ſide of the neck are dull green, with poliſhed ſteel reflections; the ſuperior coverts of the wings are greeniſh rufous; the quills of the wings rufous, terminated with ſhining green, except the two laſt, which are entirely of that colour, and the two or three preceding theſe, which are mixed with it; the back is brown, with greeniſh reflections; the rump brown, and alſo the ſuperior coverts of the tail, whoſe quills are ſhining green, with the gloſs of burniſhed ſteel; the throat and all the under ſide of the body are ruſty white, which is lighter under the belly than on the anterior parts, and on the flanks; the iris is bright red; the bill black, and the legs blackiſh.

Total length from fourteen inches and a half to ſixteen and a half; the bill ſixteen or ſeventeen lines; the noſtrils three lines, and very narrow; the tarſus twenty-one lines; the inner hind nail nine or ten lines; the wings ſix or ſeven inches; the tail eight lines, conſiſting of ten tapered quills, and exceeding the wings five inches.

M. de Sonini, to whom I am indebted for the account

account of this bird, adds that the tongue is broad, and ſlightly cut at the tip; the ſtomach is like that of the European Cuckoo; the inteſtines are twenty inches, and there are two *cæca*, of which the ſhorteſt is an inch.

After attentively comparing the deſcription of this female, in all its details, with the bird repreſented No. 824, *Planches Enlumineés*, under the name of *Philippine Cuckoo*, I am of opinion that it is the male, or at leaſt a variety, of that ſpecies: the ſame ſize, the ſame proportions, the ſame lark's ſpur, the ſame ſtiffneſs in the feathers of the head and neck, and the ſame tapered tail; only the colours are duller, for, except thoſe of the wings, which are rufous, as in the Houhou, all the reſt of the plumage is gloſſy black. The bird deſcribed by Sonnerat in his Voyage to New Guinea, under the name of the *green Antigua Cuckoo*, reſembles the preceding ſo much, that what I have ſaid equally applies to it: the head, the neck, the breaſt, and the belly, are of a dull green verging on black; the wings are of a deep brown rufous; the nail of the inner toe is more ſlender, and perhaps rather longer; all its feathers are in general hard and ſtiff; the webs are ragged, and each fibre is a new ſhaft, to which ſhorter fibres are attached. The tail does not indeed appear tapered in the figure, but this was perhaps an overſight. This Cuckoo is hardly larger than that of Europe.

ROYAL ASIATIC SOCIETY BOMBAY BRANCH

N°. 153

THE LONG HEELED CUCKOO.

Laſtly, the Madagaſcar bird, called *Toulou*, reſembles the female of the Egyptian Houhou in the ſame properties as the Cuckoo of the Philippines; its plumage is not ſo dark, eſpecially on the anterior part, where the black is ſoftened by ſpots of light rufous; in ſome individuals the olive aſſumes the place of the black on the body, and it is ſprinkled with whitiſh longitudinal ſpots, which appear alſo on the wings. I ſhould therefore ſuppoſe that they are young ones of the year's hatch, eſpecially as, in the birds of this genus, the plumage undergoes conſiderable change, it is well known, at the firſt moulting [A].

VI.

The RUFOUS-WHITE CUCKOO.

Le Rufalbin, Buff.
Cuculus Senegalenſis, Linn. Gmel. Briſſ. and Bor.
The *Straight-heeled Cuckoo*, Lath.

THE two prevailing colours of its plumage are rufous and white. When it perches, the tail ſpreads, as that of the *Coua*, like a fan; it is almoſt perpetually in motion; its cry is preciſely the ſound made by two or three jerks of

[A] Specific character of the *Cuculus Ægyptius*: "It is brown, below rufous white; its head and neck dull green; its tail wedge-ſhaped, and bright green; its wing-quills rufous."

the

the tongue upon the palate. Like the two preceding, it has a ſtraight long nail on the inner hind claw, ſimilar in form to that of the lark's; the upper ſurface of the head and neck blackiſh; the ſides of each feather deeper coloured, and yet more brilliant; the wings rufous, and their coverts rather darker near the tip; the back is of a very brown rufous; the rump and the ſuperior coverts of the tail barred tranſverſely with light brown on a deeper brown ground; the throat, the fore part of the neck, and all the under ſide of the body, are dirty white, only the feathers of the throat and neck have a more brilliant ſhaft, and the reſt of the under ſide of the body is radiated tranſverſely with delicate ſtripes of a lighter colour; the tail is blackiſh; the bill black, and the legs gray brown; the body is ſcarcely larger than that of a blackbird, but it has a much longer tail.

Total length fifteen or ſixteen inches; the bill fifteen lines; the tarſus nineteen; the nail of the inner hind toe is above five lines; the alar extent a foot and ſeven or eight inches; the tail eight inches, conſiſting of ten tapered quills, and exceeding the wings about four inches [A].

[A] Specific character of the *Cuculus Senegalenſis*: "Its tail is wedge-ſhaped; its body gray, white below; its cap and its tail-quills blackiſh."

VII.

The BOUTSALLICK, *Buff.*

Cuculus Scolopaceus, Linn. and Gmel.
Cuculus Bengalenſis Nævius, Briſſ. and Klein.
The *Brown and Spotted Indian Cuckoo*, Edw.
The *Indian Spotted Cuckoo*, Lath.

EDWARDS perceived ſo much reſemblance between this Bengal Cuckoo and the European, that he particularly marked the points of diſparity, which, in his opinion, were ſufficient to conſtitute a diſtinct ſpecies. I ſhall here ſtate theſe differences.

It is above one third ſmaller, though it has a longer ſhape, and though its body meaſures, between the bill and the tail, half an inch more than that of the ordinary Cuckoo. Its head is larger, its wings ſhorter, and its tail longer in proportion.

The prevailing colour is brown, which is deeper and ſpotted with a lighter brown on the upper part, more dilute and ſpotted with white, orange, and black, on the lower part; the light brown or ruſty ſpots form, by their arrangement on the quills of the tail and wings, a tranſverſe barring, which is a little inclined towards the point of the quills; the bill and legs are yellowiſh.

Total length thirteen or fourteen inches; the bill twelve or thirteen lines; the tarſus eleven

or

or twelve; the tail about ſeven inches, compoſed of ten tapered quills, and exceeding the wings by near five inches [A].

VIII.

The VARIEGATED CUCKOO of MINDANAO.

Cuculus Mindánenſis, Gmel.
The *Mindanao Cuckoo*, Lath.

THIS bird is ſo much variegated, that, at firſt ſight, we might take its coloured figure as deſigned for the young Cuckoo of Europe. Its throat, head, neck, and all the upper part of the body, are ſpotted with white or rufous, which is more or leſs dilute on a brown ground, which is itſelf variable, and verges on a gold green more or leſs brilliant on all the upper part of the body, including the wings and tail; but the diſpoſition of theſe ſpots is changed on the quills of the wings, where they form tranſverſe bars of pure white externally, and tinged internally with rufous, and on the quills of the tail, where they form tranſverſe bars of a ruſty co-

[A] Specific character of the *Cuculus Scolopaceus*: "Its tail is wedge-ſhaped; its body clouded on both ſides with gray and brown."

lour;

lour; the breaſt and all the under ſide of the body, as far as the extremity of the lower coverts of the tail, are white, barred tranſverſely with blackiſh; the bill is alſo blackiſh above, but ruſty below, and the legs are brown gray.

This Cuckoo is found in the Philippines; and it is much larger than the European kind.

Total length fourteen inches and a half; the bill fifteen lines; the longeſt toe ſeventeen lines; the ſhorteſt ſeven lines; the alar extent nineteen lines and a half; the tail ſeven inches, conſiſting of ten quills, which are nearly equal, and exceeds the wings four inches and a half [A].

IX.

The CUIL.,

Cuculus Honoratus, Linn. and Gmel.
Cuculus Malabaricus Nævius, Briſſ.
The *Sacred Cuckoo*, Lath.

THE name *Cuil* is applied to this bird by the inhabitants of Malabar. It is a new ſpecies introduced by M. Poivre, and differs from the preceding by its ſmallneſs, by the ſhortneſs of its bill, and by the unequal length of its tail quills.

[A] Specific character of the *Cuculus Mindanenſis*: "Its tail is rounded; its body green gold, ſpotted with brown white; below waved with white and blackiſh."

The head and all the upper ſide of the body are blackiſh cinereous, ſpotted regularly with white; the throat and all the under ſide of the body white, barred tranſverſely with cinereous; the quills of the wings blackiſh, thoſe of the tail cinereous; and both are barred with white; the iris light orange; the bill and legs of a dilute aſh colour.

The Cuil is rather ſmaller than the ordinary Cuckoo; it is held ſacred on the Malabar coaſt, becauſe, no doubt, it deſtroys the pernicious inſects. General ſuperſtition originates from error; but ſome particular ceremonies and obſervances may have their foundation in reaſon.

Total length eleven inches and a half; the bill eleven lines; the tarſus ten; the tail five and a half, conſiſting of ten tapered quills, the outer pair being ſcarcely half the length of the inner, and it exceeds the wings three inches and a half [A].

[A] Specific character of the *Cuculus Honoratus*: "Its tail is wedge-ſhaped; its body blackiſh, ſpotted with white; below ſtriped with white and cinereous."

X.

The BROWN CUCKOO, variegated with BLACK.

Cuculus Tahitius, Gmel.
Cuculus Taitenſis, Lath. Ind.
The *Society Cuckoo*, Lath. Syn.

ALL that we know of this bird beſide what is contained in the appellation, is that it has a long tail, and that it is found in the Society Iſles, and there called the *ara wereroa*. The only account given of it is contained in Capt. Cook's ſecond voyage, from which we have extracted this ſhort indication with the view of inducing travellers addicted to natural hiſtory to procure fuller information concerning this new ſpecies [A].

XI.

The RUFOUS SPOTTED CUCKOO.

Le Coucou Brun Piquete de Roux, Buff.
Cuculus Punctatus, Linn. and Gmel.
Cuculus Indicus Nævius, Briſſ.

THIS is found in the Eaſt Indies, and as far as the Philippines. The head and all the

[A] Specific character of the *Cuculus Tahitius*: "It is brown, below white, ſtriped with brown; its eye-brows white; its wing-quills ſpotted with ferruginous."

upper part of the body are dotted with rufous on a brown ground, but the quills of the wings and tail, and its ſuperior coverts, are barred tranſverſely; all the quills of the tail are terminated with light rufous; the throat and all the under ſide of the body are barred tranſverſely with blackiſh brown, on a rufous ground; there is an oblong ſpot of light rufous below the eyes; the eyes are yellowiſh rufous, the bill horn colour, and the legs brown gray.

In the female the upper ſide of the head and neck is leſs dotted, and the under ſide of the body is of a lighter rufous.

This Cuckoo is much larger than the ordinary kind, and almoſt equal to a Roman pigeon.

Total length ſixteen or ſeventeen inches; the bill ſeventeen lines; the tarſus the ſame; the alar extent twenty-three inches; the tail eight inches and a half, conſiſting of ten tapered quills, and exceeding the wings four inches and one third.

The ſubject deſcribed by Sonnerat* had not the rufous ſpot under the eyes, and what is ſtill more different, the quills of the tail were equal, as in the ſpotted Chineſe Cuckoo; ſo that it

* *Cuculus Panayus*, Linn. and Gmel.
The *Panayan Spotted Cuckoo*, Lath.

Specific character: "It is black brown, with ſpots of rufous yellow; below rufous, with black tranſverſe ſtripes; its throat black; its tail equal."

ought

ought perhaps to be viewed as a variety of the above ſpecies [A].

XII.

The CHINESE SPOTTED CUCKOO.

Cuculus Maculatus, Gmel.

WE know nothing more of this bird than its external ſhape and its plumage: it is one of the ſmall number of Cuckoos in which the tail is not tapered; the upper ſide of the head and neck is of an uniform blackiſh, except a few whitiſh ſpots that occur on the front and above the eyes; all the upper ſide of the body, including the quills of the wings and their coverts, is of a greeniſh deep gray, variegated with white, and enriched by brown gold reflections; the quills of the tail are barred with the ſame colours; the throat and breaſt variegated pretty regularly with brown and white; the reſt of the under ſurface of the body and the thighs are variegated with the ſame colours, and alſo the feathers which fall from the lower part of the thigh on the tarſus and as far as the origin of the

[A] Specific character of the *Cuculus Punctatus*: "Its tail is wedge-ſhaped; its body blackiſh, dotted with rufous; below rufous, with black ſtreaks; its tail quills barred with rufous."

toes; the bill is blackiſh above, yellow below, and the legs yellowiſh.

Total length about fourteen inches; the bill ſeventeen lines; the tarſus one inch; the tail ſix inches and a half, conſiſting of ten nearly equal quills, and exceeding the wings by four inches and a half [A].

XIII.

The BROWN and YELLOW CUCKOO, With a radiated Belly.

Cuculus Radiatus, Gmel.
The *Panayan Cuckow*, Lath.

THE throat and the ſides of the head reſemble the colour of the lees of wine; the upper part of the head is blackiſh gray; the back and the wings are of a dull dark brown; the under ſide of the quills of the wings next the body is marked with white ſpots; the tail is black, radiated, and terminated with white; the breaſt is of a dull orpiment colour; the belly is light yellow; the belly and breaſt radiated with black; the iris pale orange; the bill black, and the legs reddiſh.

[A] Specific character of the *Cuculus Maculatus*: "Its tail is wedge-ſhaped; its body above greeniſh gray, with white ſpots; below variegated with brown and white."

This

This Cuckoo is found in Panay, one of the Philippines; it is almoſt as large as the common Cuckoo, and its tail is compoſed of ten equal quills [A].

XIV.

The CRESTED JACOBINE of COROMANDEL.

Cuculus Melanoleucus, Gmel.
The *Coromandel Creſted Cuckoo*, Lath.

THIS bird is termed *Jacobine*, becauſe it is black above and white below; its creſt, conſiſting of ſeveral long narrow feathers, lies on the crown of the head, and projects a little backwards. It is probable that the bird erects its creſt when excited by paſſion.

With regard to the colours of its plumage, we might ſay that there is a ſort of black hood thrown over a white tunic; the white on the lower part is pure and unmixed, but the black on the upper part is interrupted, on the edge of the wing, by a white ſpot immediately below the ſuperior coverts, and by ſpots of the ſame

[A] Specific character of the *Cuculus Radiatus*: "It is brown black; below yellow, lineated with black; its throat and cheeks wine-colour; its top blackiſh gray."

colour, which terminate the quills of the tail; the bill and legs are black.

This bird is found on the coaſt of Coromandel; it is eleven inches in total length, its tail is compoſed of ten tapered quills, and exceeding the wings by one half its length [A].

There is in the King's Cabinet a Cuckoo brought from the Cape of Good Hope, and pretty much like this; the only differences are, that is an inch longer, that it is entirely black both above and below, except the white ſpot on the wing, which occupies its exact place, and that, of the ten middle quills of the tail, eight are not tapered, the remaining outer pair being eighteen lines ſhorter than the reſt. It is probably a variety produced by climate.

XV.

The LITTLE CUCKOO, with a Gray Head and Yellow Belly.

Cuculus Flavus, Gmel.
The *Yellow-bellied Cuckoo*, Lath.

THIS ſpecies is found in the iſland of Panay; and we owe the account of it to Sonnerat:

[A] Specific character of the *Cuculus Melanoleucus*: "It is black, below white; its tail wedge-ſhaped, tipt with white; a white ſpot on its wings; its head ſomewhat creſted."

the

the upper ſide of the head and throat is light gray; the upper ſide of the neck, back, and wings, umber coloured; the belly, the thighs, and the inferior coverts of the tail, are pale yellow, tinged with rufous; the tail is black, ſtriped with white; the legs are pale yellow, and ſo is the bill, only blackiſh at the point.

This bird is as large as a blackbird, not ſo bulky, but much longer, being eight inches and ſome lines, and the tail, which is tapered, occupies more than one half of this length [A].

XVI.

The COUKEELS.

I FIND in ſyſtems of ornithology, three birds of different ſizes, which are made into as many diſtinct ſpecies; but they appear ſo analogous in their plumage, that I am diſpoſed to regard them as the ſame, only varying in bulk, eſpecially as they are all natives of the eaſtern parts of Aſia. Edwards infers from the reſemblance between their names, that the call of the Bengal Coukeel muſt reſemble that of the European Cuckoo.

[A] Specific character of the *Cuculus Flavus:* "It is brick-coloured, below yellowiſh; its top and throat dilute gray; its tail wedge-ſhaped, and black, lineated with white."

The

The firſt and largeſt *, of the three is very near equal in ſize to the pigeon; its plumage is entirely of a ſhining black, changing into green and alſo into violet, but only under the quills of the tail; the under and inner ſide of the quills of the wings black; the bill and legs brown gray; and the nails blackiſh.

The ſecond comes from Mindanao, and is hardly larger than our Cuckoo; it is intermediate in regard to ſize between the preceding and the following one; all its plumage is blackiſh, verging on blue; the bill is blackiſh at the baſe and yellowiſh at the point; the firſt of the quills of the wings is almoſt one half ſhorter than the third, which is one of the longeſt; the tail is generally ſpread.

The third Coukeel, and the ſmalleſt †, is ſcarcely equal to the blackbird; it is entirely black, like the two foregoing, without mixture of any other permanent colour; but, according to the various angles of the incidental rays, the plumage glows with all the fugitive tints of the

* *Cuculus Orientalis*, Linn. and Gmel.
Cuculus Indicus Niger, Briſſ.
The *Eaſtern Black Cuckow*, Lath.

Specific character: "Its tail is rounded; its body gloſſy greeniſh black; its bill brown."

† *Cuculus Niger*, Linn. Gmel. and Klein.
Cuculus Bengalenſis Niger, Briſſ. and Gerini.
The *Black Indian Cuckow*, Lath.

Specific character: "It is wedge-ſhaped; its body ſhining black; its bill bright yellow."

rainbow.

rainbow. It is thus that Edwards, the original obſerver, deſcribes it, and I know not why Briſſon mentions only green and violet. As in the firſt Coukeel, the inner and under ſide of the quills of the wing are black; the bill is bright orange, rather ſhorter and thicker than in the European Cuckoo; the tarſus is thick and ſhort, and of a reddiſh brown, which is alſo the colour of the toes.

We muſt obſerve that the name *Coukeel*, beſtowed in Bengal, is peculiarly applicable to this bird, and therefore the inferences drawn between the ſimilarity of names and the reſemblance of calls, will be more concluſive with regard to it than with regard to the other two. The edges of the upper mandible are not ſtraight, but undulated.

In all the three the tail conſiſts of ten tapered quills. Their dimenſions are as follow:

FIRST COUKEEL.	Inches.	Lines.	SECOND. In.	Lin.	THIRD. In.	Lin.
Total length	16	0	14	0	9	0
Bill	0	16	0	15	0	10
Tarſus	0	17			0	7
Alar extent	23	0	0	16	wings pretty long.	
Tail	8	0	7	0	4	3
Length beyond the wings	4	0	3	6	2	9

XVII.

The GOLD-GREEN and WHITE CUCKOO.

Cuculus Auratus, Gmel.
The *Gilded Cuckoo*, Lath.

ALL that we know of this bird is that it is found at the Cape of Good Hope, and carries its tail ſpread like a fan. It is a new ſpecies.

All the upper ſurface from the baſe of the bill to the end of the tail is gold-green, waving and rich, whoſe uniformity is interrupted on the head by five white bars, one on the middle of the front, two others above the eyes, like eyebrows, and ſtretching backwards, and two others, which are narrower and ſhorter, below the eyes; moſt of the ſuperior coverts alſo, and the middle quills of the wings, all the quills of the tail, and its two largeſt ſuperior coverts, are terminated with white; the two outermoſt of the quills of the tail, and the outermoſt of thoſe of the wings, are ſtreaked with white on the outſide; the throat is white, and alſo the whole under ſurface of the body, except ſome green ſtripes on the flanks, and the ruffles which fall from the lower part of the thigh upon the tarſus; the bill is brown green, and the legs gray.

This Cuckoo is nearly of the ſize of a thruſh; its

its total length about ſeven inches; the bill ſeven or eight lines; the tarſus the ſame, clothed with white feathers as far as the middle; the tail three inches and a few lines, and conſiſting of ten tapered quills, which in their natural poſition diverge; it exceeds by only fifteen lines the wings, which are very long in proportion.

XVIII.

The LONG-SHAFTED CUCKOO*.

Cuculus Paradiſeus, Linn. and Gmel.
Cuculus Siamenſis Criſtatus Viridis, Briſſ.
The *Paradiſe Cuckoo*, Lath.

THE plumage of this bird is entirely of a dark green, which appears on the head, the body, the wings, and the tail. Yet it has not been neglected by nature, but, on the contrary, it is decorated by unuſual feathers. Beſide the tuft which diſtinguiſhes the head, the tail has a remarkable form; the outermoſt pair of quills is near ſix inches longer than all the reſt; and they have no webs except for the ſpace of three inches at their extremity. It was on account of theſe two ſhafts that Linnæus gave the bird the appellation of *Paradiſe Cuckoo:* for the ſame reaſon the two following might be termed *Wi-*

* This ſpecies is new, and introduced by M. Poivre.

dow

dow Cuckoos. The iris is of a fine blue; the bill blackiſh; and the legs gray: it is found at Siam, where Poivre ſaw it alive; it is nearly as large as the jay.

Total length ſeventeen inches; the bill fourteen lines; the tarſus ten; the tail ten inches and nine lines, and rather forked, and exceeding the wings about nine inches [A].

XIX.

The COLLARED CRESTED-CUCKOO*.

Cuculus Coromandus, Linn. and Gmel.
Cuculus Coromandelanenſis Criſtatus, Briſſ.
The *Collared Cuckow*, Lath.

THIS bird is alſo ornamented with a creſt, and is remarkable for the length of two quills of its tail; but theſe are the middle ones, which project beyond the lateral ones, as alſo obtains in ſome ſpecies of widow-birds.

All the upper ſide is blackiſh, from the head inclnſively to the end of the tail, except a white collar about the neck, and two round ſpots of

[A] Specific character of the *Cuculus Paradiſeus:* "The two outermoſt quills of its tail are very long, and dilated at the tip; its head creſted, and its body green."

* This ſpecies is new, and was obſerved and figured in its native country by M. Poivre.

a gray colour behind the eyes, one on each ſide, which in ſome meaſure reſemble ear-pendants: we muſt alſo except the wings, of which the quills and their middle coverts are variegated with rufous and blackiſh; and ſo are the ſhoulders, though their great quills and coverts are entirely blackiſh; the throat and the thighs are blackiſh; all the reſt of the under ſide of the body is white; the iris yellowiſh; the bill deep cinereous; the legs alſo cinereous, but lighter coloured. This Cuckoo is found on the coaſt of Coromandel, and is nearly of the ſize of the red-wing.

Total length twelve inches and a quarter; the bill eleven lines; the tarſus ten; the wings ſhort; the tail ſix inches and three quarters, conſiſting of ten quills, the two middle ones much longer than the lateral ones, which are tapered; and it exceeds the wings by five inches and a half [A].

[A] Specific character of the *Cuculus Coromandus*: "Its tail is wedge-ſhaped; its body black, below white; a bright white collar."

XX.

The SAN-HIA of CHINA*.

Cuculus Sinenſis, Linn. and Gmel.
Cuculus Cæruleus, Briſſ.
The *Chineſe Cuckow*, Lath.

THIS Cuckoo reſembles the preceding ſpecies, and conſequently the widow birds, by the length of the two middle quills of the tail; its plumage is remarkable, though it conſiſts of only two principal colours, blue on the upper ſide, and ſnowy white on the under ſide; but it would ſeem that nature, happy always in her careleſs mood, has ſuffered a few drops that are ſnowy white to fall from her pallet upon the crown of the head, where it forms a ſpot through which the blue appeared in a thouſand points; and alſo upon the cheeks a little behind, where two ſorts of ear-pendants are repreſented, as in the preceding ſpecies; and upon the quills and coverts of the tail, each of which is marked by a round white ſpeck near the tip: beſides, it appears melted into the azure of the rump and of the baſe of the great quills of the wing, and has conſiderably diluted the tinge; the whole is ſet off to advantage by the dark blackiſh colour of the throat and the ſides of the head; and laſtly, the beautiful colour of the iris,

* This ſpecies is new, and ſeen and figured by M. Poivre in its native country.

the

ROYAL ASIATIC SOCIETY

N°154

THE BLUE CUCKOO.

the bill, and the legs, adds to the richneſs of the garb.

Total length thirteen inches; the bill eleven lines, and there are ſome hairs about its upper baſe; the tarſus ten lines and a half; the tail ſeven lines and a half, conſiſting of ten very unequal quills, of which the two middle ones exceed the two adjacent lateral ones by three inches and a quarter; they exceed the outermoſt by five inches and three lines, and the wings by almoſt their whole length [A].

XXI.

The TAIT-SOU.

Cuculus Cæruleus, Linn. and Gmel.
Cuculus Madagaſcarienſis Cæruleus, Briſſ.
The *Blue Cuckoo*, Lath.

As uſual, I retain the ſavage name, which is generally the beſt and the moſt characteriſtic.

The Tait-Sou, ſo called in its native country, is wholly of a fine blue, and the general uniformity is relieved by very dazzling tints of violet and green, reflected by the quills of the wings; and by tints of pure violet, without the

[A] Specific character of the *Cuculus Sinenſis*: "Its tail is wedge-ſhaped and long; its body blue, below white; a white ſpot on the tips of the tail-quills."

leaſt caſt of green, which are reflected by the quills of the tail; laſtly, the black colour of the legs and bill gives ſhade to the picture.

Total length ſeventeen inches; the bill ſixteen lines; the tarſus two inches; the alar extent near twenty inches; the tail nine inches, and compoſed of ten quills, of which the two middle ones are a little longer than the lateral ones; it exceeds the wings ſix inches [A].

XXII.

The POINTER CUCKOO.

Cuculus Indicator, Gmel. and Bor.
The *Honey-Guide*, Sparrman.
The *Honey Cuckoo*, Lath.

It is in the interior part of Africa, at ſome diſtance from the Cape of Good Hope, that this bird is found, which is known by its ſingular inſtinct of pointing out the neſts of wild bees *. In the morning and evening it utters its cry, *cherr*, *cherr*, *cherr*, which is very ſhrill, and

[A] Specific character of the *Cuculus Cæruleus*: "Its tail is rounded; its body blue."

* According to ſome travellers, the cry of this bird is *wieki, wieki*; and this word *wieki* ſignifies honey in the language of the Hottentots. It ſometimes happens that the hunter in following the call of this Cuckoo, is devoured by wild beaſts; which has given occaſion to ſay that the bird concerts with them to conduct their prey.

ſeems

ſeems to invite the hunters and others, who ſearch for honey in the wilderneſs; they anſwer it in a more hollow tone, and continue always advancing: as ſoon as it perceives them it flies onward, and hovers over the hollow tree where the ſwarm is lodged; if the hunters are too tardy in following it, it redoubles its cries, returns back to them, ſtops and flutters about, to rouſe their attention. It omits nothing to induce them to profit by the little treaſure which it diſcovers, but which it probably could not enjoy without the aſſiſtance of man; either becauſe the entrance into the neſt is too narrow, or on account of ſome other circumſtances. While the party are employed in plundering the honey, the bird ſits in a neighbouring buſh, watching eagerly and expecting its ſhare of the booty, which is commonly left for it, though never in ſufficient quantity to ſatiate its appetite, or extinguiſh or blunt its ardour in this kind of purſuit.

This is not the idle tale of a common traveller; it is the obſervation of an enlightened man, who aſſiſted at the deſtruction of ſeveral republics of bees, betrayed by this little ſpy, and who communicates an account of what he ſaw to the Royal Society of London. I ſhall add the deſcription of the female, which he made from the only two ſubjects that he could procure, and which he ſhot to the great ſcandal of

the Hottentots; the exiſtence of a uſeful creature is every where precious.

The upper ſide of the head is gray; the throat, the fore part of the neck, and the breaſt, are whitiſh with a green tinge, which grows more dilute as it ſpreads, and is ſcarcely perceptible on the breaſt; the belly is white; the thighs the ſame, marked with an oblong black ſpot; the back and rump are ruſty gray; the ſuperior coverts of the wings are brown gray, thoſe next the body marked with a yellow ſpot, which, on account of its ſituation, is often concealed under the ſcapular feathers; the quills of the wings are brown; the two middle quills of the tail are longer and narrower than the reſt, and of a brown verging on ruſt colour; the two following pairs are blackiſh, their inſide dirty white; thoſe which ſucceed are white, terminated with brown, and marked with a white ſpot near their baſe, except the laſt pair, where this ſpot almoſt vaniſhes; the iris is ruſty gray; the eye-lids black; the bill brown at its baſe, yellow at the end, and the legs are black.

Total length ſix inches and a half; the bill about ſix lines, and there are ſome briſtles about the baſe of the lower mandible; the noſtrils are oblong, with a projecting margin, placed near the baſe of the upper mandible, and ſeparated only by its ridge; the tarſus is ſhort; the

nails ſlender; the tail tapered, and compoſed of twelve quills; it exceeds the wings by three-fourths of its length [A].

XXIII.

The VOUROU-DRIOU*

Cuculus Afer, Gmel.
Cuculus Madagaſcarienſis Major, Briſſ.
The *African Cuckow*, Lath.

THIS ſpecies and the preceding differ from all the reſt, in the number of quills in the tail; theſe amounting to twelve, though commonly they are only ten. The differences peculiar to the Vourou-driou conſiſt in the ſhape of its bill, which is longer, ſtraighter, and not ſo convex above; in the poſition of the noſtrils, which are oblong, and placed obliquely near the middle of the bill; and in a character which belongs alſo to the birds of prey, viz. that the female is larger than the male, and of a very

[A] Specific character of the *Cuculus Indicator*: "It is ferruginous gray, below white; its eye-lids naked and black; a bright yellow ſpot on its ſhoulders; its tail wedge-ſhaped and ferruginous."

* The natives of Madagaſcar call it *Vouroug-driou*. We are indebted to M. Briſſon for the account of this ſpecies, which is not the largeſt in that iſland, witneſs the Greeniſh Cuckoo already noticed.

different plumage. This bird is found in the iſland of Madagaſcar, and no doubt on the correſponding part of Africa.

In the male the crown of the head is blackiſh, with reflections of green and roſe copper; there is a ſtreak of black placed obliquely between the bill and the eye; the reſt of the head, the throat, and the neck, are cinereous; the breaſt, and all the reſt of the under ſide of the body, are of a handſome white gray; the upper ſide of the body, as far as the end of the tail, is of a green colour, changing into roſe-copper; the middle quills of the wing are nearly of the ſame colour; the large ones blackiſh, verging on green; the bill is deep brown; and the legs reddiſh.

The female is ſo different from the male, that the inhabitants of Madagaſcar have called it by a different name, *Crombe*. The head, the throat, and the upper ſide of the neck, are ſtriped tranſverſely with brown and rufous; the back, the rump, and the ſuperior coverts of the tail, are of an uniform brown; the ſmall ſuperior coverts of the wings are brown, edged with rufous; the great ones dull green, edged and terminated with rufous; the quills of the wing are the ſame as in the male, only the middle ones are edged with rufous; the fore part of the neck, and all the reſt of the under ſide of the body, are variegated with blackiſh; the quills of the tail are of a gloſſy brown, terminated with

with rufous; the bill and legs are nearly as in the male [A].

Their relative dimenſions are as follow:

	MALE.		FEMALE.	
	Inch.	Lin.	Inch.	Lin.
Total length - - - - -	15	0	- - - 17	6
Bill - - - - - - -	2	0	- - - 2	4
Tarſus - - - - - -	1	3	- - - 1	3
Alar extent - - - -	25	8	- - - 29	4
Tail - - - - - - - -	7	0	- - - 7	9
Exceſs above the wings	2	4	- - - 2	7

[A] Specific character of the *Cuculus Afer:* "It is copper-green, below ſhining gray; its head and neck cinereous; its top copper blackiſh; its tail equal and gold green, below black."

AMERICAN BIRDS,

WHICH ARE RELATED TO THE CUCKOO.

I.

The OLD-MAN, or RAIN-BIRD.

Cuculus Pluvialis, Gmel.
Cuculus Jamaicenſis, Briſſ.
Picus Major Leucophæus, Ray.
Cuculus Jamaicenſis Major, Sloane, Brown, and Klein.
The *Rain Cuckoo*, Lath.

THE name of *Old-Man* has been given to this bird, becauſe, under its throat, there is a ſort of white down or beard, the attribute of age: it is alſo called the *Rain-Bird*, becauſe it never calls, except before rain. It continues the whole year in Jamaica, and haunts not only the woods, but the ſtraggling buſhes: it ſuffers the hunters to approach very near before it takes flight. Its ordinary food conſiſts of ſeeds and worms.

The upper ſide of the head is covered with downy or ſilky feathers of a deep brown; the reſt of the upper ſide of the body, including the wings and the two middle quills of the tail, is olive cinereous; the throat is white, and the fore part of the neck the ſame; the breaſt, and the reſt of the under ſurface of the body, rufous; all the lateral

lateral quills of the tail are black tipt with white, and the outermoſt is edged with white; the upper mandible is black; the lower one is almoſt white; the legs bluiſh black: it is ſomewhat larger than the blackbird.

The ſtomach of the one diſſected by Sloane was very large in proportion to the ſize of the bird, in which reſpect it reſembles the European ſpecies; it was lined by an exceedingly thick membrane; the inteſtines were twiſted like a ſhip's cable, and covered with a quantity of yellow fat.

Total length ſix inches and three quarters; the bill one inch; the tarſus thirteen lines; the alar extent equal to the total length; the tail from ſeven and a half to eight inches, compoſed of ten tapering quills, and projecting almoſt entirely beyond the wings [A].

VARIETIES of the RAIN CUCKOO.

I. THE RUFOUS-WINGED OLD MAN *. The ſame colours as in the preceding appear on the

[A] Specific character of the *Cuculus Pluvialis*: "It is cinereous olive, below rufous; its throat white."

* *Cuculus Americanus*, Linn. and Gmel.
Cuculus Carolinenſis, Briſſ. and Klein.
The *Carolina Cuckow*, Cateſby, Penn. and Lath.
Specific character: "It is wedge-ſhaped; its body cinereous above, and white below; its lower mandible yellow."

upper

upper ſurface and on the tail, and almoſt the ſame on the bill; but the white of the under ſurface of the body, which in the Rain-bird was confined to the throat and breaſt, extends in this bird over all the lower part: the wings have a ruſty caſt, and are longer in proportion; laſtly, the tail is ſhorter and of a different ſhape.

This Cuckoo is ſolitary; it reſides in the darkeſt foreſts, and on the approach of winter it leaves Carolina to find a milder air.

Total length thirteen inches; the bill fourteen lines and a half; the tail ſix inches, conſiſting of ten quills, of which the three middle ones are longer than the reſt, but equal to each other, and the two lateral pairs are ſhorter, and the more ſo in proportion to their diſtance from the centre; the longeſt project four inches beyond the wings.

II. THE LITTLE OLD MAN*, known at Cayenne by the name of Mangrove Cuckoo (*Coucou des Paletuviers*). This bird, the female eſpecially, reſembles the Jamaica Rain-bird ſo much, both in its colours and in its general conformation, that the deſcription of the one may ſerve for the other; the only difference conſiſts in the ſize, the Cayenne bird being

* *Cuculus Minor*, Gmel.
Cuculus Seniculus, Lath. Ind.
The *Mangrove Cuckow*, Lath. Syn.

Specific character: "It is cinereous olive, below tawny, its chin white."

much

much ſmaller, its tail is alſo rather longer in proportion; but we may ſtill ſuppoſe that it is a variety reſulting from climate. It feeds on inſects, and particularly on the larger caterpillars* that gnaw the leaves of the mangroves; and hence it is fond of lodging among theſe trees, where it renders an uſeful ſervice.

Total length one foot; the bill thirteen lines; the tarſus twelve; the tail five inches and a half, conſiſting of ten tapering feathers, and exceeds the wings three inches and one third.

II.

The TACCO†.

Cuculus-Vetula, Linn. Gmel. and Bor.
Cuculus Jamaicenſis, Briſſ. Klein, and Ger.
Picus, ſeu Pluviæ Avis canescens, Ray and Sloane.
The *Long-bellied Rain Cuckoo*, Lath.

SLOANE poſitively aſſerts that, except the bill, which in the Tacco is longer, more ſlender, and whiter, it reſembles the Rain-bird preciſely; he aſcribes to it the ſame habits, and ap-

* Theſe large caterpillars are four inches and a half long, and ſeven or eight lines broad. In the years 1775 and 1776, they multiplied ſo exceſſively, that they devoured almoſt entirely moſt of the mangroves and many other plants. It was then that the iſlanders regretted their not having multiplied this ſpecies of Cuckoo.

† In the Antilles it is named *Tacco* from its cry; the negroes call it *Cracra* and *Tacra-Bayo*. In St. Domingo it is termed *Colivicou*.

plies

plies the ſame names. But Briſſon, reſting probably on this remarkable difference in the length and conformation of the bill, has made this bird a diſtinct ſpecies. This ſeparation is the more proper, as it appears from cloſer inſpection that the plumage is not the ſame, and that even the white beard is wanting, which gave name to the preceding ſpecies: beſides, the Chevalier Lefebre Deſhayes, who has obſerved the Tacco with attention, finds that its habits are different from thoſe aſcribed by Sloane to the Rain-bird.

Taceo is the uſual cry of this Cuckoo, but is ſeldom heard. It pronounces the firſt ſyllable hard, and deſcends a whole octave on the ſecond; it never utters this till after it has given a jerk with its tail, which it commonly does when it ſhifts its place, or perceives any one approach. It has alſo another cry *qua, qua, quá, qua*, but which is never heard unleſs it be alarmed by the ſight of a cat, or ſome other dangerous enemy.

Sloane ſays that this Cuckoo, like the one which he terms *Rain-bird*, forebodes rain by its loud calls; but the Chevalier Deſhayes diſcovered no ſuch habit *.

Though the Tacco lives generally in cultivated grounds, it alſo frequents the woods, becauſe it there finds its proper food, which con-

* To the Chevalier Deſhayes I owe my information with regard to the habits and economy of the Tacco.

ſiſts

ſiſts of caterpillars, beetles, worms and vermin, *ravets* *, wood-lice, and other inſects, which unfortunately are too common in the Antilles, both in the cleared lands and in the foreſts. It alſo preys upon ſmall lizards, called *anolis* †, ſmall ſnakes, frogs, young rats, and ſometimes, it is ſaid, upon ſmall birds. It ſurpriſes the lizards when they are eagerly watching on the branches for flies, and therefore off their guard. With regard to ſnakes, it ſeizes them by the head, and in proportion as the part ſwallowed digeſts, it ſucks up the reſt of the body, which hangs out from the bill. It is thus uſeful, ſince it deſtroys the pernicious animals: it would prove of ſtill greater utility, could it be domeſticated; and this might be poſſible, for it is not ſhy, but even ſuffers the young negroes to catch it in the hand, though it has a ſtrong bill, and could make a ſtout defence.

Its flight is never lofty; it begins flapping with its wings, and, then ſpreading its tail, it ſhoots along, or rather ſkims than flies. It flutters from buſh to buſh, and hops from bough to bough: it even ſprings upon the trunks of trees, to which it clings like the wood-peckers; and ſometimes it alights on the ground, and hops about like the magpye, always in purſuit of

* A ſort of cock-chaffers, very offenſive and pernicious, frequent in the Weſt Indies. T.

† Written alſo *anoulys*. They have a fine, ſleek ſkin, and are ſometimes eaten by the people of the French Weſt India iſlands. T.

inſects

inſects or reptiles. It is ſaid to exhale continually a rank ſmell, and that its fleſh is unpalatable; which is very probable, conſidering the kind of ſubſtances upon which it feeds.

Theſe birds retire in the breeding ſeaſon into the depth of the foreſts, and remain ſo well concealed, that no perſon has ever ſeen their neſt. One might almoſt be induced to ſuppoſe that they have none, and that, like the European Cuckoo, they lay their eggs in other birds' neſts; but if this were the caſe, they would differ from all the other American Cuckoos, which themſelves build and hatch.

The Tacco has no brilliant colours in its plumage, but it has always a neat and becoming air: the upper ſide of its head and body, including the coverts of the wings, is gray, which is pretty deep, with greeniſh reflections on the great coverts only; the fore ſide of the neck and breaſt is aſh gray, and over all theſe ſhades of gray there is ſpread a faint reddiſh tint; the throat is light fulvous; the reſt of the under ſide of the body, including the thighs, and the inferior coverts of the wings, are more or leſs of a lively fulvous; the ten firſt quills of the wing are of a bright rufous, terminated with greeniſh brown, which, in the following quills, approaches conſtantly to a ruſt colour; the two middle quills of the tail are of the colour of the back, with greeniſh reflections; the eight others are the ſame about their middle, dark brown,

with blue reflections, near their baſe, and terminated with white; the iris is brown yellow; the eyebrows red; the bill blackiſh above, and of a lighter colour below; the legs are bluiſh. This Cuckoo is not ſo large as the European one; it is found in Jamaica, in St. Domingo, &c.

Total length fifteen inches and a half (ſeventeen and one-third, according to Sloane); the bill is eighteen lines according to Sloane; twenty-one according to the Chevalier Deſhayes, and twenty-five according to Briſſon; the tongue is cartilaginous, terminated by filaments; the tarſus about fifteen lines; the alar extent equal to the total length of the bird; the tail eight inches, according to Deſhayes, and eight inches and three quarters, according to Briſſon, and conſiſting of ten tapering quills; the intermediate ones overlap the lateral ones; it projects about five inches and a half beyond the wings [A].

[A] Specific character of the *Cuculus Vetula*: "Its tail is wedge-ſhaped; its body duſkiſh, below brick coloured; the eye-lids red."

III.

The GUIRA-CANTARA.

Cuculus-Guira, Gmel.
Cuculus Braſilienſis Criſtatus, Briſſ.
Guira Acangatara, Ray and Will.
The *Braziliian Creſted Cuckow*, Lath.

THIS Cuckoo is very noiſy; it lives in the foreſts of Brazil, and makes them echo to its cry, which is louder than pleaſant. It has a kind of tuft, whoſe feathers are brown, edged with yellowiſh; thoſe of the neck and wings are, on the contrary, yellowiſh, edged with brown; the upper and under ſides of the body are of a pale yellow; the quills of the wings are brown; thoſe of the tail brown alſo, but terminated with white; the iris is brown; the bill dun-yellow; the legs ſea-green. It is as large as the European magpye.

Total length fourteen or fifteen inches; the bill about an inch, a little crooked at the end; the tarſus one inch and a half, and clothed with feathers; the tail conſiſting of eight quills, according to Marcgrave; but were not ſome of them wanting? they appear equal in the figure.

IV.

The QUAPACTOL, or the LAUGHER.

Cuculus Ridibundus, Gmel.
Avis Ridibunda Quapachtototl, Will. and Ray.
Cuculus Mexicanus, Briſſ.
The *Laughing Cuckow*, Lath.

THIS Cuckoo is called the *Laughing-bird*, on account of its call; and for the ſame reaſon, ſays Fernandez, it was reckoned unlucky by the Mexicans before the true religion was introduced among them. With regard to the Mexican name *Quapachtototl*, which I have contracted and ſoftened, it alludes to the fulvous colour which is ſpread over all the upper ſurface of its body, and even on the quills of the wings; thoſe of the tail are alſo fulvous, but of a darker caſt; the throat is cinereous, and alſo the fore-part of the neck and breaſt; the reſt of the under ſide of the body is black; the iris is white, and the bill bluiſh black.

The ſize of this Cuckoo is nearly equal to that of the European kind; it is ſixteen inches in total length, and the tail alone occupies the one half of this.

[A] Specific character of the *Cuculus Ridibundus*: "It is fulvous; its throat and breaſt cinereous; its belly, its thighs, and the lower coverts of its tail, black."

V.

The HORNED CUCKOO,

Or the ATINGACU of BRAZIL.

Cuculus Cornutus, Linn. and Gmel.
Cuculus Braſilienſis Cornutus, Briſſ.
Atinga guacu mucu, Ray and Will.

THE ſingular property of this Brazilian Cuckoo is, that there are long feathers on the head, which it can erect at pleaſure, and form a double tuft; and hence the epithet of *horned*, which has been beſtowed by Briſſon. The head is large, and the neck ſhort, as uſual in this genus; all the upper ſurface of the head and body is ſooty; the wings are the ſame, and even the tail, though this has a darker caſt, and the feathers at its extremity are marked with a ruſty white ſpot, ſhaded with black, which melts into a pure white; the throat is cinereous, and ſo is all the under ſide of the body; the iris is blood coloured; the bill yellowiſh green, and the legs cinereous.

This bird is diſtinguiſhed too by the length of its tail; for though not larger than a field-fare or large thruſh, and its body only three inches long, its tail is nine; it conſiſts of ten tapering quills, the intermediate ones overlapping the lateral ones; the bill is a little hooked

at

at the end; the tarſuſes are rather ſhort, and feathered before [A].

VI.

The BROWN CUCKOO, variegated with Rufous.

Cuculus Nævius, Linn. and Gmel.
Cuculus Cayanenſis Nævius, Briſſ.
The *Spotted Cuckow*, Lath.

THE upper ſide of the body is variegated with brown and with different ſhades of rufous; the throat is light rufous variegated with brown; the reſt of the under ſide of the body is ruſty white, which aſſumes a diſtinct light rufous on the inferior coverts of the tail; its quills and thoſe of the wings are brown, edged with light rufous, having a greeniſh caſt, particularly on the lateral quills of the tail; the bill is black above, rufous on the ſides, ruſty below, and the legs cinereous. It is obſerved as a ſingular property, that ſome of the ſuperior coverts of the tail extend almoſt to two-thirds of its length. With regard to ſize, this Cuckoo is compared to the red-wing.

Total length ten inches and two thirds; the bill nine lines; the tarſus fourteen lines;

[A] Specific character of the *Cuculus Cornutus*: "Its tail is wedge-ſhaped; its creſt cleft; its body ſooty."

the alar extent above an inch; the tail about ſix inches, conſiſting of ten tapering quills, and exceeding the wings by four inches.

The Cuckoo known at Cayenne by the name of the *Barrier-bird* is nearly as large as the preceding, and very ſimilar in regard to plumage: in general, it has rather leſs rufous, gray occupying its place, and the lateral quills of the tail are tipt with white; the throat is light gray, and the under ſide of the body white; the tail too is longer. But notwithſtanding theſe trifling differences, we muſt conſider it as a variety of the preceding, perhaps only ſexual.

The name *Barrier-bird* alludes to its habit of perching upon the paliſades round plantations; in that ſituation it continually ſhakes its tail.

Theſe birds, though not very wild, never gather in flocks; yet many live in the ſame diſtrict at once; they ſeldom haunt the foreſts: they are more common, we are aſſured, than the *Piaye* Cuckoos, both in Cayenne and Guiana.

[A] Specific character of the *Cuculus Naevius*; "Its tail is wedge-ſhaped; its body brown and ferruginous; its throat marked with brown furrows; its tail-quills tipt with tawny."

VII.

The ST. DOMINGO CUCKOO.

*Le Cendrillard**, Buff.
Cuculus Dominicus, Linn. Gmel. and Briſſ.

THE prevailing colour of its plumage is aſh-gray, which is more intenſe above, as far as the two middle quills of the tail incluſively, more dilute below, and intermixed with more or leſs rufous on the quills of the wings; the three pairs of lateral quills in the tail are blackiſh, terminated with white, and the outermoſt pair is edged with the ſame white colour; the bill and legs are dun gray. This bird is found in Louiſiana and St. Domingo, in different ſeaſons, no doubt: it is ſaid to be nearly of the ſize of the red wing.

I have ſeen in M. Mauduit's Cabinet a variety named the *Little Gray Cuckoo*, which differed not from the preceding, except that all the under ſurface was white, that it was rather larger, and that its bill was not ſo long.

Total length from ten to twelve inches; the bill fourteen or fifteen lines, the two mandibles bent downwards; the tarſus one inch; the alar extent five inches and a half; the tail five inches and one third, conſiſting of ten tapered feathers;

* So termed by M. Montbelliard, on account of its cinereous plumage.

it exceeds the wings from two inches and a half to three inches [A].

VIII.

The PIAYE CUCKOO.

Cuculus Cayanus, Linn. and Gmel.
Cuculus Cayanenſis, Briſſ.
The *Cayenne Cuckoo*, Lath.

I ADOPT the epithet *Piaye*, applied to this Cuckoo in the iſland of Cayenne; but I adopt not the ſuperſtition which gave it birth: *Piaye* ſignifies *devil* in the language of the natives, and alſo *prieſt*, that is among an idolatrous people, *miniſter* or *interpreter of the devil*. This obviouſly ſhews that it is looked upon as an unlucky bird: for this reaſon the Indians and negroes are ſaid to have an abhorrence of its fleſh; but may not its perpetual leanneſs and unpalatable quality account for their averſion?

The Piaye is not ſhy; it allows a perſon to get very near it, and does not fly away till the moment he is about to ſeize it: its flight is compared to that of the king-fiſher; it commonly frequents the banks of rivers, and lodges

[A] Specific character of the *Cuculus Dominicus*: "Its tail is wedge-ſhaped; its body gray-brown, below partly white; its three lateral tail-quills tipt with white."

beneath

beneath the low branches of trees, where it probably watches the inſects which conſtitute its food; when perched it wags its tail, and perpetually ſhifts its place. Perſons who have lived at Cayenne and ſeen this Cuckoo ſeveral times in the fields, have never yet heard its call. It is nearly as large as a blackbird; the upper ſide of its head and body is purple cheſnut, including the wings of the tail, which are black near the end, terminated with white, and the quills of the wings, which are terminated with brown; the throat and the fore part of the neck are alſo purple-cheſnut, but of a lighter tinge, and which varies in different individuals; the breaſt and all the under ſide of the body are cinereous; the bill and legs are brown gray.

Total length fifteen inches and nine lines; the bill fourteen lines; the tarſus fourteen lines and a half; the alar extent fifteen inches and one third; the tail ten lines, conſiſting of ten tapered and very unequal quills; it exceeds the wings about eight inches. N. B. The ſpecimen in Mauduit's Cabinet is rather larger.

I have ſeen two varieties of this ſpecie. The one nearly of the ſame ſize, but of different colours; the bill was red; the head cinereous; the throat and breaſt rufous; and the reſt of the under ſide of the body blackiſh aſh-colour.

The other variety has nearly the ſame colours, only the cinereous of the under ſide of the body is ſhaded with brown; it has alſo the ſame

natural habits, the only difference conſiſting in the ſize, which is almoſt equal to that of the red-wing.

Total length ten inches and a quarter; the bill eleven lines; the tarſus eleven lines and a half; the alar extent eleven inches and a half; the tail near ſix inches, conſiſting of ten equal quills, and exceeding the wings about four inches [A].

IX.

The BLACK CUCKOO of CAYENNE.

Cuculus Tranquillus, Gmel.

ALMOST the whole plumage is black, except the bill and iris, which are red, and the upper coverts of the wings, which are edged with white; but the black itſelf is not uniform, for it is lighter below than above.

Total length about eleven inches; the bill ſeventeen lines; the tarſus eight lines; the tail compoſed of ten quills, a little tapered, and exceeding the wings about three inches.

M. de Sonini aſſures me that this bird has a tubercle on the fore part of its wing. It lives ſolitary and tranquil, generally perched upon

[A] Specific character of the *Cuculus Cayanus*: "Its tail is wedge-ſhaped; its body purpliſh-cheſnut, below cinereous; all its tail-quills tipt with white."

the trees which grow on the ſides of creeks, and it is by no means ſo active as moſt of the Cuckoos: in ſhort, it may be regarded as the intermediate ſhade between theſe and the barbets.

X.

The LITTLE BLACK CUCKOO of CAYENNE *.

Cuculus Tenebroſus, Gmel.
The *White-rumped Black Cuckow*, Lath.

THIS Cuckoo reſembles the preceding, both in the colour of its plumage, and in its habits and economy. It does not frequent the woods, yet it is no leſs wild; it remains whole days perched upon a detached branch in a cleared ſpot, without making any exertion beyond what is neceſſary to catch the inſects on which it feeds; it neſtles in hollow trees, and ſometimes in the ground, when it finds holes ready formed.

This Cuckoo is entirely black, except on the hind part of the body, which is white, and this white, which extends to the legs, is ſeparated from the back of the fore part by a ſort of orange cincture. In the ſpecimen which I

* We are indebted to M. de Sonini for the account of this bird.

ſaw

ſaw at Mauduits', the white did not ſtretch ſo far.

Total length eight inches and a quarter; the bill nine lines; the tarſus very ſhort; the tail is not three inches, it is a little tapered, and projects not much beyond the wings [A].

[A] Specific character of the *Cuculus Tenebroſus*: "It is black; its belly and thighs ferruginous; its rump and creſt white; its tail equal."

The A N I S.

ANI is the name which the natives of Brazil give to this bird *, and which we retain, though the French travellers † and our modern nomenclators call it *Tobacco-end* ‡, a ridiculous appellation beſtowed on account of the reſemblance of its plumage to the colour of a tobacco roll. Father Dutertre aſſerts, indeed, as the reaſon of that denomination, that it ſeems to articulate the words *petit bout de petun*, which is falſe and improbable; eſpecially as the Creoles of Cayenne have an appropriated deſignation for its ordinary warble, *Canary boiler*, becauſe it reſembles the noiſe of a kettle boiling. It has alſo the name *Devil*, and one of the ſpecies is called the *Savanna devil*, and the other the *Mangrove devil*; the former living conſtantly in the ſavannas, and the latter frequenting the ſea ſhores and the margins of ſalt marſhes, where the mangroves grow.

Their generic characters are theſe:—Two toes before and two behind, the bill ſhort, hooked, thicker than broad; the lower mandible ſtraight, the upper one raiſed into a ſemicircle at its origin, and this remarkable convexity extends over all the upper part of the bill till

* Marcgrave. † Dutertre.

‡ *Bout de Petun*, or *Bout de Tabac*.

within

within a little diſtance of its extremity, where it is hooked; this convexity is compreſſed on the ſides, and forms a ſort of ſharp ridge quite along the upper mandible; below and round there riſe ſmall ragged feathers as ſtiff as hogs' briſtles, about half an inch long, and all pointed forwards: this ſingular conformation of the bill is ſufficient to diſcriminate theſe birds, and ſeems to conſtitute a ſeparate genus, though it includes only two ſpecies.

The SAVANNA ANI.

FIRST SPECIES.

Crotophaga-Ani. Linn. Gmel. and Bor.
Crotophagus, Briſſ. and Gerini.
Pſittaco congener Ani, Ray and Will.
Monedula tota nigra major, Sloane and Brown.
Cornix garrula major, Klein.
The *Razor-billed Blackbird,* Cateſby.
The *Leſſer Ani,* Lath.

THIS Ani is as large as a blackbird, but its large tail gives it a longer form; for this is ſeven inches, which is more than half the total length of the bird: the bill is thirteen lines long, and riſes nine lines and a half; it is black, and ſo are the legs, which are ſeventeen lines in height. The deſcription of its colours ſhall be very ſhort: all the body is black, faintly ſhaded with ſome violet reflections, except a ſmall

ſmall edge of deep ſhining green, which borders the feathers on the upper part of the back and the coverts of the wings, and which cannot be perceived at a certain diſtance, for then the bird appears entirely black. The female differs not from the male; they conſtantly keep in troops, and are of ſo ſocial a diſpoſition that they lodge and lay their eggs together in the ſame neſt. They conſtruct it with dry ſticks, but uſe no lining; it is exceedingly wide, often a foot in diameter, and its capacity is ſaid to be proportioned to the number of fellow-lodgers which they intend to admit. The females hatch in company, and five or ſix are often ſeen in the ſame neſt. This inſtinct, which would prove uſeful in the cold countries, ſeems to be at leaſt ſuperfluous in the ſouthern regions, where the neſt will eaſily preſerve its heat. It originates entirely from the impulſe of ſocial temper; for they are conſtantly together, both when they fly and when they repoſe and ſettle on the branches of trees as near as poſſible to each other. In this ſituation they all warble in concert, and almoſt through the whole day; and their ſmalleſt troops conſiſt of eight or ten, and they ſometimes amount to twenty-five or thirty. They fly low, and to ſhort diſtances; and hence they oftener alight among buſhes and thickets than upon trees. They are neither timorous nor ſhy; and never make any remote retreat. They are hardly ſcared by the report of fire arms, and it is eaſy

to

to kill many, one after another. But they are in no requeſt, for their fleſh cannot be eaten, and the birds have an offenſive ſmell: they feed on ſeeds and ſmall ſerpents, lizards, and other reptiles; they alſo alight upon oxen and cows to feed on the ticks, maggots, and inſects, which neſtle in their ſkin [A].

The MANGROVE ANI.

L'Ani des Palituviers, Buff.

SECOND SPECIES.

Crotophaga Major, Gmel.
Crotophagus Major, Briſſ.
The *Great Ani*, Lath.

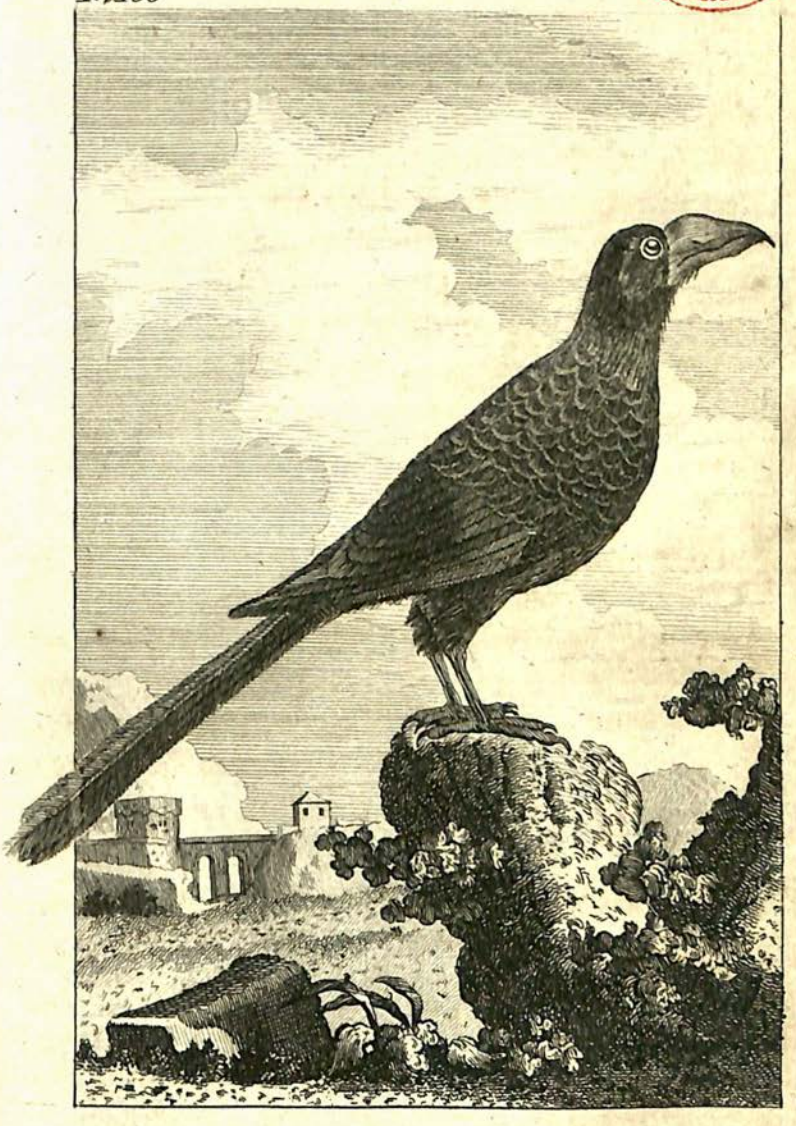
THIS bird is larger than the preceding, and almoſt equal to the jay; it is eighteen inches long, including the tail, which occupies the half of that extent: its plumage is nearly of the ſame browniſh black colour as that of the former, only it is ſomewhat more variegated with brilliant green, which terminates the feathers of the back and the coverts of the wings; inſomuch that if we reſted our opinion ſolely on the difference of ſize and colours, we might regard theſe two birds as only varieties of the ſame

[A] Specific character of the *Crotophaga-Ani:* "It is ſmaller; its feet ſcanſory."

ſpecies.

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

N°. 155



THE ANI.

ſpecies. But what proves that they are really two diſtinct ſpecies is, that they never intermingle; the one kind conſtantly inhabits the open ſavannas, the other lodges among the mangroves only: yet the latter have the ſame natural habits with the former; they likewiſe keep in flocks; they haunt the brinks of ſalt marſhes; they lay and hatch, many of them together in the ſame neſt; and ſeem to be only a different race accuſtomed to live in more wet ſituations, where the abundance of inſects and reptiles affords an eaſier ſubſiſtence.

Since writing the above, I have received a letter from the Chevalier Lefebre Deſhayes concerning theſe St. Domingo birds, and I ſhall here extract what he ſays with regard to the Mangrove Ani.

"This bird," ſays he, "is one of the moſt common in the iſland of St. Domingo . . . . The negroes give it different appellations, *Tobacco-end*, *Amangoua*, *Black Parrot*, &c. . . . . If we attentively conſider the ſtructure of the wings of this bird, the ſhortneſs of its flight, and the weight of its body compared to its bulk, we ſhall not heſitate to conclude that it is a native of the new world: how, with its feeble narrow wings, could it traverſe the vaſt ocean that divides the two continents? . . . The kind is peculiar to ſouth America. When it flies it ſpreads its wings; but its motion is not ſo quick nor ſo continued as the parrot's . . . It cannot withſtand

withſtand the violence of the wind, and the hurricanes deſtroy numbers of theſe birds.

"They inhabit the cultivated grounds, or ſuch as have once been in the ſtate of cultivation, and they are never found in the lofty foreſts. They feed on various ſorts of ſeeds and fruits, ſuch as ſmall millet, maize, rice, &c. and when reduced to want, they eat caterpillars and ſome other inſects. We cannot ſay that they have a ſong or warble; it is rather a whiſtling or chirping: ſometimes, however, this becomes more varied, but it is always harſh and diſagreeable; it receives different inflexions according to the paſſions which incite it. If the bird perceives a cat, or other dangerous animal, it informs its companions by a very diſtinct ſcream, which it prolongs or repeats until its apprehenſions are quieted: its fears are moſt remarkable when it has young, for then it flutters and beats about its neſt. Theſe birds live in ſociety, though they do not form into ſuch large flocks as the ſtares; they ſeldom part from one another .... and even previous to their hatching, we ſee ſeveral males and females working together at the conſtruction of the neſt, and afterwards the females hatch beſide each other, each ſitting on her eggs and rearing her young. This harmony is the more admirable, ſince love commonly diſſolves all other ties but what it forms ... Their amours commence early: in February the males ardently court the

the females, and in the following month the happy couple are buſy in collecting materials for the neſt . . . Theſe birds are more laſcivious than even ſparrows; and, during the whole ſeaſon of their ardour, they are much more lively and cheerful than at any other time . . . They breed in ſhrubs, coffee-trees, buſhes, and hedges; and they place their neſts in the cleft where the ſtem divides into ſeveral branches . . . When ſeveral females aſſociate together, the one readieſt to lay does not wait till the neſt be completed, but ſits on her eggs while the reſt are employed in enlarging the fabric. They employ a precaution which is unuſual with other birds, viz. to cover their eggs with leaves and graſs-ſtalks, as faſt as they lay them . . . . And during incubation, they cover the eggs in the ſame manner, if they are obliged to leave them in queſt of food . . . . The females which thus hatch beſide each other are not quarrelſome, like hens that breed in the ſame crib; they take their ſtations in order: ſome, however, before they lay, make a partition in the neſt with ſtalks of herbs, to contain their own eggs; but if the eggs happen to be jumbled together, one female hatches them indiſcriminately; ſhe collects them, heaps them, and covers the whole with leaves, ſo as to diffuſe the heat equally, and prevent its diſſipation. . . . Yet each female lays ſeveral eggs . . . Theſe birds build their neſt very ſolid, though rude, with

the ſmall ſtems of filamentous plants, the branches of the citron trees, and other ſhrubs; the inſide only is covered with tender leaves that ſoon wither; and upon this bed the eggs are depoſited: theſe neſts are wide, and much raiſed at the margin; ſometimes the diameter is more than eighteen inches, but its ſize depends on the number of females which it is deſtined to receive. It would be difficult to decide with accuracy whether all the females contained in the ſame neſt have each their male; perhaps theſe birds are polygamous, in which caſe it would, in ſome meaſure, be neceſſary to enlarge the neſts, and thus, even without any friendly ſocial principles, they might be conſtrained to unite in performing the work . . . The eggs are as large as thoſe of a pigeon; they are of an uniform beryl, and have none of thoſe little ſpots on the ends, which are uſual on moſt of the eggs of wild birds . . . It is probable that the females hatch twice or thrice a year, according to circumſtances; if the firſt ſucceeds, they do not make another till autumn; if on the contrary, the eggs are robbed, or eaten by ſnakes or cats, they make a ſecond, and towards the end of July, or during the courſe of Auguſt, they hatch a third time: certain it is, that their neſts are found in the months of March, May, and Auguſt . . . They are gentle, and eaſily tamed; and it is ſaid, that if they are taken young, they may be educated and taught to

ſpeak,

ſpeak, though their tongue is flat, and terminates in a point, while that of the parrot is fleſhy, thick, and round . . .

" The ſame friendſhip and concord which appears during incubation, continues after the broods are hatched; when the mothers have covered together, they feed ſucceſſively all the little family . . . . The males aſſiſt in bringing ſupplies; but when the females hatch ſeparately, they rear their young apart, yet without ſhewing any jealouſy or ill temper; they carry the food by rotation, and the young ones receive it from all the mothers. The nature of the food depends upon the ſeaſon, ſometimes conſiſting of caterpillars, maggots, and inſects, and ſometimes of fruits and ſeeds, ſuch as millet, maize, rice, and wild oats, &c. . . . . In a few weeks the young ones are able to try their wings, but they do not venture far; ſoon afterwards they perch beſide their parents among the buſhes, and then are expoſed to the ravages of the birds of prey . . .

" The Ani is an innocent bird; it does not plunder the rice plantations, like the blackbird; it does not feed upon the nuts of the cocoa-tree, like the woodpecker; nor does it conſume the patches of millet, like the parrots or parrakeets."

[A] Specific character of the *Crotophaga Major*: " It is larger; its feet ſcanſory."

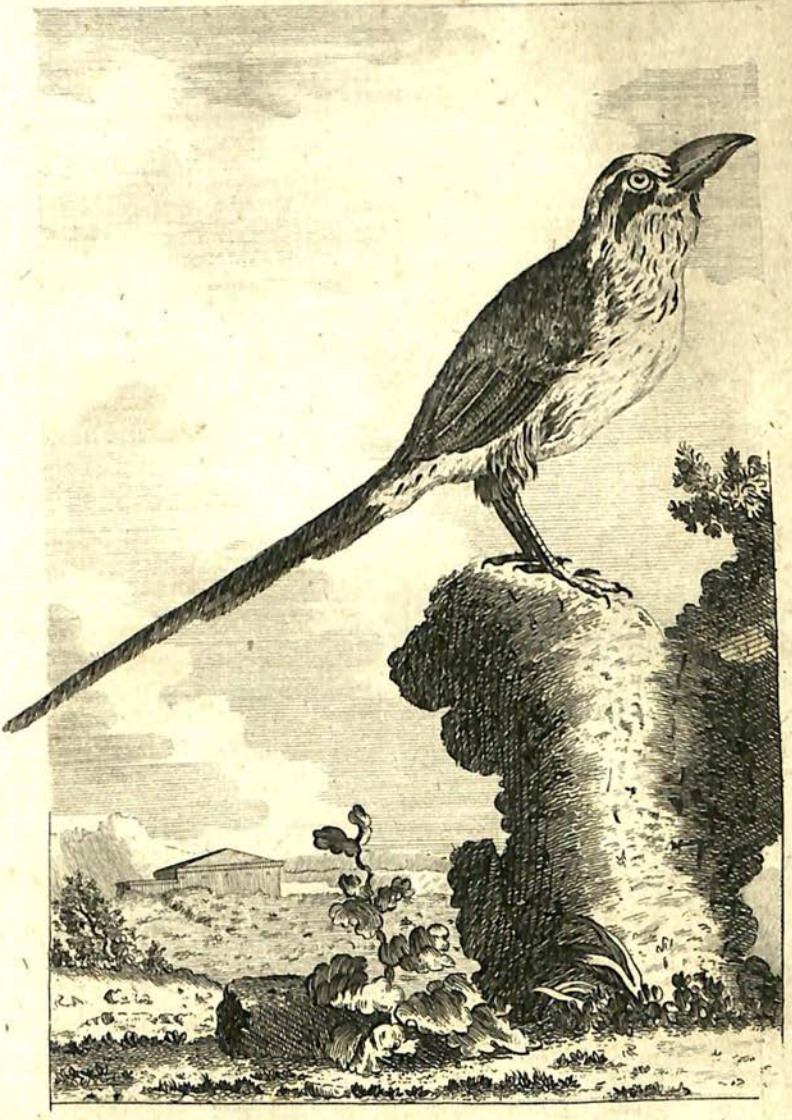
The HOUTOU or MOMOT, *Buff.*

Ramphaſtos-Momota, Linn. Gmel. and Bor.
Momotus Braſilienſis, Lath. Ind.
Motmot & Yayaubquitotl, Fernandez.
Motmot & Avis Caudata, Nieremberg.
Guiraguainumbi Braſilienſibus, Johnſt.
Iſpidæ, ſeu Meropis affinis, Ray and Will.
The *Braſilian ſaw-billed Roller*, Edw.
The *Braſilian Motmot*, Lath. Syn.

WE retain the name *Houtou*, which has been given by the natives of Guiana, ſince it is expreſſive of the cry. Whenever the bird makes a ſpring, it briſkly and diſtinctly articulates *Houtou*; the tone is deep, and reſembles a man's voice: that character alone ſufficiently diſcriminates the living bird, whether it be in the ſtate of freedom or of domeſtication.

Fernandez, who firſt noticed the Houtou, has inadvertently mentioned it by two different names, and this miſtake has been copied by all the nomenclators: Marcgrave is the only naturaliſt who has not been miſled. It would ſeem that Fernandez was deceived by the ſight of a mutilated ſpecimen, which induced him to admit two ſpecies; for the ſingle naked quill which he obſerved could not be natural, ſince in all birds the feathers grow conſtantly by pairs, juſt as other animals have two legs or two arms.

BOMBAY
BRANCH
OF THE
ROYAL ASIATIC SOCIETY



THE BRASILIAN MOTMOT.

The Houtou is about the ſize of the magpie; it meaſures ſeventeen inches and three lines from the point of the bill to the end of the great quills of the tail; its toes are placed as in the king-fiſhers, the manakins, &c. But it is diſtinguiſhed from theſe, and even from all other birds, by the form of its bill, which, though proportioned to the body, is conical and incurvated, and the edges of the two mandibles indented. This character would diſcriminate the Houtou; but it has another more ſingular one peculiar to itſelf; to wit, near the ends of the two long quills of the middle of the tail there is a ſpace of about an inch, abſolutely bare or ſhaved, ſo that the ſhaft is naked in that part. This appearance, however, belongs to the adult; for when the bird is young theſe quills are, like the other feathers, webbed their whole length. It has been ſuppoſed that this naked ſpace is not a natural production, and that it is perhaps owing merely to the caprice of the bird, which plucks the feathery fibres. But it is obſerved that in young ſubjects the webs are continuous and entire, and as they grow up theſe become ſhorter by degrees, ſo as at laſt to diſappear. We ſhall not ſtop to deſcribe more particularly the plumage of this bird, for the colours are ſo much intermingled that it would be impoſſible by words to convey a diſtinct idea of them; they are alſo affected by age or ſex.

They are difficult to rear, though Piſo aſſerts the contrary; and as they feed upon inſects, it is not eaſy to chooſe what will ſuit their taſte. Thoſe caught old cannot be bred; they are extremely ſhy, and refuſe all ſuſtenance. The Houtou is a wild ſolitary bird, never found but in the gloomy receſſes of foreſts; it aſſociates not in flocks, or even in pairs; it is almoſt continually on the ground, or among the low branches, for it never properly flies, but leaps nimbly, pronouncing ſmartly *houtou*. It is early in motion, and its cry is heard before the warble of the other birds. Piſo was ill informed when he ſaid that it builds on lofty trees; for it never conſtructs a neſt, nor does it riſe to any conſiderable height: it is contented with ſome hole of the *armadillos*, of the *cavies*, or of other ſmall quadrupeds, which it finds on the ſurface of the ground; it lines this with dry herb ſtalks, and there lays its eggs, which are generally two in number. The Houtous are common in the interior parts of Guiana; but they ſeldom frequent the neighbourhood of plantations. Their fleſh is hard and unpalatable food. Piſo is miſtaken too, in ſaying that they live upon fruits. As this is the third time he has been miſled, it is probable that he has applied the attributes of another bird to the preſent, which he deſcribes only from Marcgrave, and with which he was perhaps

perhaps unacquainted; for it is certain that the *Houtou* is the ſame bird with the *Guirà-guai-numbi* of Marcgrave, which is difficult to tame, which is unfit for eating, and which neither perches nor neſtles upon trees, nor feeds on fruits.

[A] Specific character of the *Ramphaſtos-Momota:* "Its feet are greſſory (*i. e.* the toes diſpoſed three before and one behind)."

The HOOPOES, the PROMEROPS, and the BEE-EATERS.

COMPARISON is the great ſource of knowledge. When objects have many common properties, their contraſt throws mutual light; it points out the real differences which obtain, and deſtroys thoſe falſe analogies which are apt to be formed when they are viewed ſeparately. For this reaſon, I have ranged in a ſingle article the general facts with regard to the three contiguous genera of the Hoopoes, the Promerops, and the Bee-eaters.

Our Hoopoe is well known by its beautiful double tuft, which is almoſt *unique* in its kind, ſince it reſembles no other, except that of the cockatoo: its bill is long, ſlender, and incurvated, and its legs are ſhort. The black and white Hoopoe of the Cape differs from ours in ſeveral particulars, and eſpecially becauſe its bill is ſhorter and more pointed, as will be found in the deſcriptions. But it ought to be referred to that genus, being more related to it than to any other.

The Promerops reſembles the Hoopoes ſo much that, were we for a moment to adopt the principles of the ſyſtem-makers, we ſhould ſay that they are Hoopoes without the creſt *. But

* *Huppes ſans Huppe.*

the

the fact is that they are rather taller, and their tail is much longer.

The Bee-eaters reſemble, in the ſhortneſs of their legs, the Hoopoe and king-fiſher, more eſpecially the latter, by the ſingular diſpoſition of their toes, of which the middle one adheres to the outer as far as the third phalanx, and to the inner one as far as the firſt phalanx only. The bill of the Bee-eaters, which is pretty broad and ſtrong at its baſe, holds a middle rank between the ſlender bills of the Hoopoes and Promerops on the one hand, and the long, ſtraight, thick, and pointed bills of the king-fiſhers on the other; but, on the whole, it rather inclines to the former, ſince the Bee-eaters live upon inſects like the Hoopoes and the Promerops, and not upon ſmall fiſh like the king-fiſhers; and it is well known how much the force and conformation of the bill ſerve to regulate the choice of the food.

There are alſo ſome traces of analogy between the genus of the Bee-eaters and that of the king-fiſhers. In the firſt place, the beautiful beryl, which is by no means common in the European birds, decorates alike the plumage of our king-fiſher and of our Bee-eater. In the ſecond place, the greateſt number of the ſpecies of Bee-eaters have their two middle quills of the tail projecting far beyond the lateral ones; and the genus of the king-fiſher contains alſo ſome ſpecies in which theſe two middle quills project alſo.

alſo. And in the third place, there are ſome ſpecies of king-fiſhers in which the bill is a little incurvated, which, in this reſpect, reſembles that of the Bee-eaters.

On the other hand, how cloſe ſoever the Bee-eaters and Promerops be related, nature, ever rich and unexhauſted, has ſtill ſeparated them; or rather ſhe has melted them into one another by imperceptible ſhades. Theſe intermediate birds incline ſometimes more to the one genus, and ſometimes more to the other; I ſhall denominate them *Merops*.

All theſe different birds, which reſemble each other in ſo many reſpects, are ſimilar alſo in point of ſize. The largeſt ſpecies exceed not the thruſhes, and the leaſt are ſcarcely ſmaller than the ſparrows and the warblers. The exceptions are few, and obtain equally in the different genera.

With regard to climate, a diſcrimination takes place. The Promerops inhabit Aſia, Africa, and America; and never occur in Europe: if they are natives of the old continent, they muſt have migrated into the new by the north of Aſia. The Hoopoe is peculiar to the old world, and I may aſſert the ſame thing of the Bee-eaters, though there is a bird termed the *Cayenne Bee-eater*: for ornithologiſts who have frequently viſited that iſland have never ſeen this bird. And with regard to the two Bee-eaters depicted by Seba, the one from Brazil and the other from Mexico,

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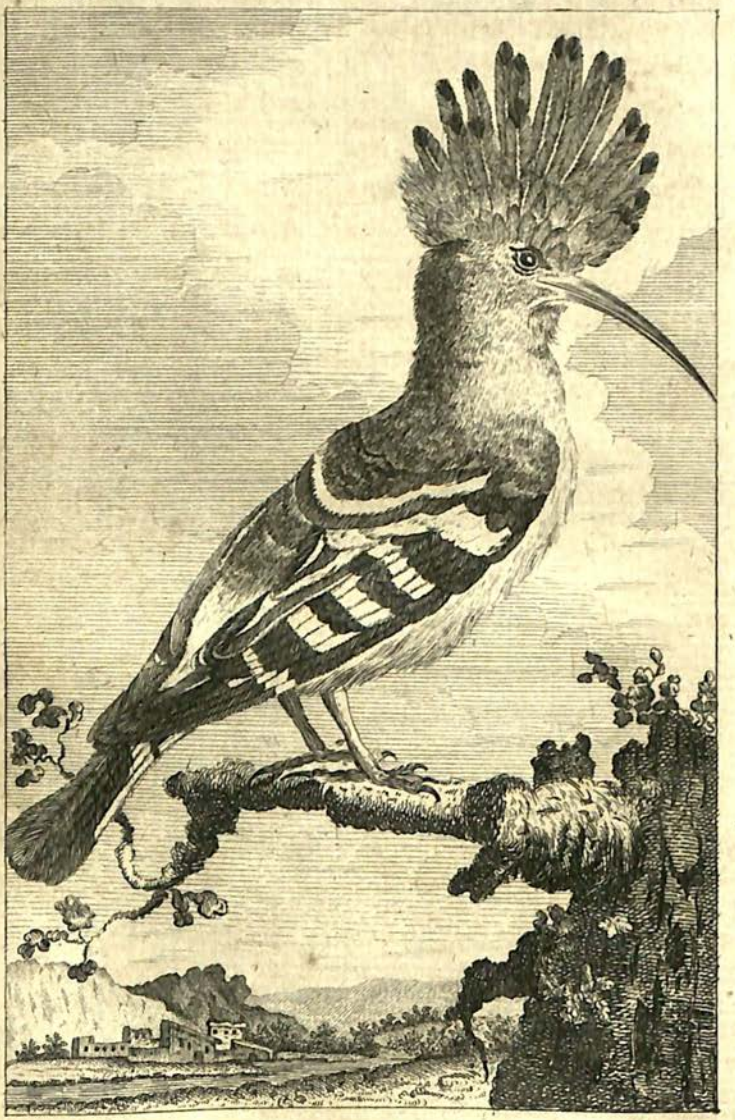

THE COMMON HOOPOE.

Mexico, the authority of that compiler is too ſuſpicious to have much weight; particularly as theſe would be the only two ſpecies of Bee-eaters that are natives of the new continent.

The HOOPOE*.

La Huppe, Buff.
Upupa-Epops, Linn. and Gmel.
Upupa, Friſ. Briſſ. Scop. Kram. Klein, Mul. Sibb. &c.
The *Dung-bird*, *Hooper*, *or Hoopdop*, Charleton.

A RESPECTABLE ornithologiſt, Belon, ſays, that this bird has derived its name from its large beautiful tuft *(huppe)*; but a little attention would have convinced him that it is really formed from the Latin *Upupa*.

This

* In Arabic, *Al Hudud Gareſol:* In Egyptian, *Cucufa:* In Hebrew, *Kaath, Cos, Hakocoz, Ataleph, Racha, Anapha, Chaſida, Dukiphat:* In Greek, Επωψ: In Latin, *Upupa*; which name, according to Plautus and St. Jerome, was given alſo to girls of pleaſure: In Italian, *Buba, Upega, Gallo di Paradiſo, Galletto di Maggio, Puppula, Criſtella, Putta:* In Spaniſh, *Abubilla:* In Portugueſe, *Popa:* In German, *Wyd-Hopff, Wede-Hoppe, Katbaan:* In Flemiſh, *Hupetup:* In Brabantiſh, *Hueron:* In Norwegian, *Ærfugl:* In Daniſh, *Her-fugl:* In Swediſh, *Hær-fozel:* In Scanian, *Popp.*

Varro, *Lingua Lat.* lib. IV. ſays, that the Latin name *Upupa* is formed from the cry of the bird, *poo, poo*; and a fable explains the origin of this cry. Tereus, king of Thrace, having raviſhed Philomela, the ſiſter of his wife Progne, the latter, in revenge, killed her ſon by him, and ſerved up the fleſh at her huſband's table.

Upon

This tuft, in its ordinary poſition, reclines backwards, both when the bird flies or feeds; in ſhort, whenever it is free from the agitation of paſſion *. I had occaſion to ſee a Hoopoe, which was caught in a net, and which was old, or at leaſt grown up, and conſequently had acquired its natural habits. Its attachment for its miſtreſs was already ſtrict and ardent; it ſeemed uneaſy unleſs it alone enjoyed her company; if ſtrangers happened to break in upon its domeſtic ſociety, it erected its tuft, through ſurpriſe or diſquietude, and fled to the top of a bed which was in the ſame room; ſometimes it had the reſolution to deſcend from its aſylum, but then it flew directly to its miſtreſs, who enjoyed excluſively all its regard and affection. It had two very different kinds of cries; the one ſoft and tender, flowing from ſentiment, and directed to its miſtreſs; the other harſh and ſhrill, and expreſſing anger or fear. It was never confined in its cage, either by day or night, but ran about the houſe; and, though the windows were often open, it never ſhewed any deſire of effecting its eſcape. At laſt, happening to be ſcared, it diſappeared ſuddenly; it flew but a ſhort diſtance, and not being able to find its way back again, it

Upon the diſcovery of this horrid repaſt, Progne was changed into a ſwallow, Philomela into a nightingale, and Tereus into a *Hoopoe*; who, ſtill bemoaning his loſs, ſcreams πυ, πυ, or *where, where*; *where, my ſon.*

* It is ſaid alſo to ſeek to get near the fire, and to be fond of ſleeping before the chimney.

threw

threw itſelf into a nun's cell, where the window had been left open; ſo neceſſary was human ſociety become to its exiſtence and comfort! It died in this retreat, where it could only be fed, and where its proper mode of treatment was unknown. Yet it lived three or four months in its firſt condition, its ſole ſubſiſtence being a little bread and cheeſe. Another Hoopoe was fed for eighteen months upon raw fleſh*; it was exceſſively fond of this, and haſtened to eat it out of the hand; it rejected, on the contrary, what had been cooked. This predilection for raw fleſh ſeems to indicate an analogy to the rapacious birds and thoſe which live upon inſects.

The ordinary food of the Hoopoe is inſects in general, and eſpecially ſuch as grovel on the ſurface†, either their whole life, or during a part of it; beetles, ants‡, worms, wild bees, and many kinds of caterpillars§, &c. Hence this

* Geſner fed one with hard eggs: Olina with worms, or with the hearts of oxen and ſheep, cut into little longiſh ſhreds, nearly like worms; but, above all, he adviſes not to ſhut it up in a cage.

† The Hoopoe ſeldom perches upon trees; but, when it does, it prefers oziers, willows, and probably all ſuch as grow in wet grounds.

‡ Friſch ſays that it digs with its long bill into the ant-hills, to extract the eggs: and, in fact, the one fed by Geſner was very fond of the eggs or nymphs of ants, but rejected the ants themſelves.

§ Salerne adds that it clears the houſe of mice; but this is undoubtedly by driving them away, for with a bill ſo ſlender, with claws

this bird haunts wet grounds *, where its long and ſlender bill can eaſily penetrate; and hence, in Egypt, it follows the retreat of the Nile: for, in proportion as the waters ſubſide †, the plains are left covered by a coat of ſlime, which, being heated by a powerful ſun, quickly ſwarms with immenſe numbers of all kinds of inſects ‡. Accordingly, the migratory Hoopoes are very fat and delicious. I ſay the migratory Hoopoes, for there are others in the ſame country often ſeen on the date trees, in the neighbourhood of Roſetta, which are never eaten: the ſame is the caſe with thoſe which are very frequent in Grand Cairo §, where they breed with full ſe-

claws ſo weak, and with a throat ſo narrow, it could neither ſeize nor devour them, ſtill leſs ſwallow them entire. It alſo eats vegetable ſubſtances, and among others, myrtle-berries and grapes. *See* Olina and the ancients. I found in the gizzard of thoſe which I diſſected, beſides inſects and worms, ſometimes graſs, ſmall ſeeds, and buds, ſometimes round grains of an earthy matter, ſometimes ſmall ſtones, and ſometimes nothing at all.

* It is becauſe it runs thus in the mud that its feet are almoſt always bedaubed.

† Hence the appearance of the Hoopoe in Egypt announced the retreat of the waters of the Nile, and conſequently the ſeed time: This bird is accordingly repreſented often in the Egyptian hieroglyphics.

‡ Among others a kind of inſect peculiar to Egypt, and which reſembles a wood-louſe. The Nile leaves alſo, in its retreat, the young and ſpawn of frogs, which, in caſe of want, may ſupply the place of inſects.

§ They are eaten in Bologna, Genoa, and in ſome other parts of Italy and of France. Some prefer them to quails. It is true that all our Hoopoes are birds of paſſage.

curity

curity on the houſe-tops *. It is eaſy, indeed, to conceive that Hoopoes which live remote from man, in forſaken plains, are better food than ſuch as haunt the ſtreets or the environs of a large city: the former ſubſiſt upon the inſects that lodge among the clay or mud; the latter prowl among all ſorts of filth, which abounds wherever vaſt numbers of men are collected; a circumſtance which cannot fail to beget an averſion to the city Hoopoes, and even communicate an offenſive odour to their fleſh †. There is a third intermediate claſs, which ſettling in our gardens, live upon caterpillars and earth worms ‡. It is univerſally agreed that the fleſh of the Hoopoe, which feeds ſo naſtily, has no fault but that of taſting ſtrongly of muſk, which is perhaps the reaſon that cats, which are generally ſo fond of birds, will not touch it §.

In Egypt the Hoopoes gather, it is ſaid, in

* Theſe two laſt notes were communicated to me by M. de Sonini, in two letters, dated from Cairo and Roſetta, the 4th and 5th of September, 1777.

† It is to theſe ſtationary, city Hoopoes that we muſt refer what Belon aſſerts, perhaps with too great latitude, "that their fleſh is good for nothing, and that no perſon in any country will taſte it." They were alſo held to be unclean by the Jews.

‡ Olina, *Uccelleria*. Albin ſpeaks of a Hoopoe that lived in a garden in the middle of Epping Foreſt.

§ Several expedients are mentioned for removing this ſavour of muſk; the moſt general advice is to cut the head from the bird the moment it is killed: yet the hind parts taſte more of muſk than the fore parts.

ſmall

ſmall flocks, and if one happens to ſtray, it calls on its companions with a very ſhrill cry of two notes, *zi*, *zi**. In moſt other countries they appear either ſingle, or at moſt in pairs. Sometimes in the ſeaſon of their paſſage numbers are found in the ſame diſtrict; but theſe are ſolitary individuals, unconnected by any ſocial tie, ſo that when they are hunted, one riſes after another. Yet as they have all the ſame organization, they muſt be actuated by the ſame views; hence they direct their flight towards the ſame country, and follow nearly the ſame rout. They are ſcattered through almoſt the whole of the ancient continent, from Sweden, where they inhabit the great foreſts, and even from the Orkneys and Lapland †, as far as the Canaries and the Cape of Good Hope on the one hand, and the iſlands of Ceylon and Java ‡ on the other. They are migratory in every part of Europe, and even in the delicious climates of Greece and of Italy §: they are ſometimes found at ſea ‖; and excellent obſervers ⊥ claſs them with thoſe birds which paſs the iſle of Malta twice a year. It muſt, however, be confeſſed, that they do not conſtantly hold the ſame courſe; for it often happens, that though they appear numerous in a

* Note communicated by M. de Sonini.

† Schœffer. ‡ Edwards. § Belon and Pliny.

‖ "On the 18th of March, while we were paſſing through the Canaries, a Hoopoe alighted on our veſſel, and flew towards the weſt." *Voyage à l'Iſle de France & de Bourbon, par un Officier du Roi.* Merlin, 1773, t. I.

⊥ Among others, Comamnder *Deſmazys.*

place.

place one year, very few or none of them can be found there in the following year. In ſome countries too, ſuch as England, they are very rare, and never neſtle; in others, as in Bugey, they never occur at all. And ſince Bugey is mountainous, it follows that they are not attached to mountains, at leaſt not to that degree which Ariſtotle ſuppoſed *. But this is not the only fact which contradicts the aſſertion of that philoſopher; for the Hoopoes ſettle in the midſt of our plains, and are frequently ſeen on the ſtraggling trees which grow on ſandy iſlands, ſuch as thoſe of Camargue in Provence †. Friſch ſays that they can creep on the bark of trees like the woodpeckers; which is perfectly conſiſtent with analogy, ſince, like theſe birds, they neſtle in the hollow trunks. In theſe they uſually lay their eggs, and alſo in the holes of walls upon the mould or duſt which is uſually collected at the bottoms of ſuch cavities, but do not line it with ſtraw, as Ariſtotle ſays. Yet there are ſome exceptions, at leaſt what are apparently ſuch: of ſix hatches that were brought to me, four of them had no litter, but the two others had a very ſoft bedding compoſed of leaves, moſs, wool, feathers ‡, &c. Theſe ſeeming

* Hiſt. Anim. *Lib.* I. 1.

† Note communicated by the Marquis de Piolenc.

‡ In the bottom of one of theſe neſts was more than two litrons of moſs (a litron is a meaſure, the 16th part of a buſhel) fragments

ſeeming diſparities may be reconciled; for it is very probable that the Hoopoe ſometimes lays her eggs in neſts that were, in the preceding year, occupied by woodpeckers, wrynecks, titmice, and other birds, which had lined them according to their different inſtincts.

It has been long ſaid and often repeated, that the Hoopoe beſmears her neſt with the excrements of the wolf, of the fox, of the horſe, of the cow, and of all ſorts of animals, not excepting man *; and that ſhe does this with the view to defend her young by the loathſome ſtench †. But the fact is not more true than the intention; for the Hoopoe never plaſters the mouth of its neſt like the nuthatch. At the ſame time, the neſt is indeed very dirty and offenſive,

of May-flies, and ſome worms that had no doubt dropt from the bill of the mother or of her young. The ſix trees in which theſe neſts were found were three black cherries, two oaks, and a pear-tree; the loweſt of theſe neſts was three or four feet above the ground, the higheſt ten.

* *See* Salerne, Gerini, &c. It is pretty ſingular that the ancients, who regarded the Hoopoe as an inhabitant of the mountains, of the foreſts, and of the deſerts, ſhould impute to it the employing human excrements for its neſt. This is another particular fact injudiciouſly generalized: the mother, in collecting the inſects for her young among filth, might dirty herſelf, and ſo pollute her neſt; and ſuperficial obſervers would thence conclude that this was a habit common to the whole ſpecies.

† It has alſo been ſaid that her object was to diſpel the charms that might be caſt upon her brood; for the Hoopoe was reckoned very ſkilful in this way. She knew all the plants that defeat faſcinations, thoſe which give ſight to the blind, thoſe which open barred

ſenſive, the neceſſary conſequence of its great depth, which is often twelve, fifteen, or even eighteen inches: the young ones cannot throw out their excrements, and therefore grovel a long time among filth *. Hence undoubtedly the proverb, "Naſty as a Hoopoe." But it is only in rearing its young that this bird can be accuſed of naſtineſs; at other times it is very cleanly. The one which I before ſpoke of never ſoiled its miſtreſs, nor the chairs, nor even the middle of the room, but always retired to the top of the bed, which was the remoteſt and moſt concealed place.

The female lays from two to ſeven † eggs,

barred gates; which laſt is propped by a fable equally abſurd. Ælian gravely relates that a man having three times in ſucceſſion cloſed the neſt of a Hoopoe, and having remarked the herb with which the bird opened it, he employed the ſame herb with ſucceſs to charm the locks of the ſtrongeſt coffers. Death even does but heighten its virtues, and give them new energy; its heart, its liver, its brain, &c. eaten, with certain magical incantations applied, ſuſpended to different parts of the body, occaſioned pleaſant or frightful dreams, &c. In England, it was formerly held an unlucky bird; and even at preſent, the people of Sweden regard its appearance as a preſage of war. The ancients had better reaſon, methinks, to believe that when it was heard to ſing before the time when they uſually began to dreſs the vine, it promiſed a good vintage: in fact, its early ſong would imply a mild ſpring and a forward ſeaſon, which is ever favourable to the maturity of the vine, and to the quality of its fruit.

* When Schwenckfeld was a child, he had his fingers dirted in taking a brood of Hoopoes out of a hollow oak.

† Linnæus and the authors of the Britiſh Zoology mention only two eggs. But this caſe is as rare, at leaſt in our climates, as that of ſeven eggs. In the more northern countries, ſuch as that of Sweden, the Hoopoe may be leſs prolific.

but more commonly four or five; theſe eggs are greyiſh, ſomewhat larger than thoſe of the partridge. They do not all hatch at the ſame time; for three young Hoopoes, taken out of the ſame neſt, differed very much in ſize; in the largeſt one, the quills of the tail had ſprouted ſeventeen lines, and in the ſmalleſt only ſeven lines. The mother has often been ſeen carrying food to the neſtlings, but I never heard that the father paid them that attention. As theſe birds hardly ever appear in knots, it is moſt likely that the family diſperſes as ſoon as the brood are fledged; and this is the more probable, if, as the authors of the *Italian Ornithology* aſſert, each pair makes two or three hatches in the courſe of the year, thoſe of the firſt hatch might fly as early as the end of June.—Theſe are the few facts and conjectures that I am able to offer in regard to the incubation of the Hoopoe and the education of its young.

The cry of the male is *bou, bou, bou*; it is moſt frequent in the ſpring, and may be heard at a great diſtance *. Thoſe who have liſtened attentively to theſe birds, pretend to have noticed different inflections and accents, correſponding to their different circumſtances: ſome-

* Ariſtophanes thus expreſſes the cry of theſe birds: *epopoe, popopa, popoe, popoe, io, io, ito, ito, ito, ito.* I ſuſpect he inclines to make them ſpeak Greek. Of all the names that have been given to them, that which imitates their ſong the beſt is *bou, bou*; by which they are known in Lorrain, and in ſome other provinces of France. Ποπιζειν in Greek, from πωψ, ſignifies *to ſing like a Hoopoe.*

times a hollow moaning, which foreboded rain; ſometimes a ſhriller cry, indicating a fox in ſight, &c. This character bears ſome analogy to the two voices of the tame Hoopoe mentioned above. That bird ſeemed fond of muſic; whenever its miſtreſs played on the harpſichord or the mandoline, it kept as near the inſtruments as poſſible during the whole time.

It is ſaid that this bird never drinks at ſprings or brooks; and that, for this reaſon, it is ſeldom caught in ſnares. It is true that the Hoopoe killed in Epping Foreſt in England ſhunned the numerous decoys laid for the purpoſe of taking it alive; but the one which I have frequently mentioned had been caught in a net, and drank, from time to time, by plunging its bill with a briſk motion, and without repeatedly lifting up its head, like many birds: it had probably a power of raiſing the water into its gullet by a kind of ſuction. The Hoopoes retain that briſk motion of the bill even at other times, when they neither eat nor drink; this habit muſt ariſe from their mode of living in the ſavage ſtate; catching inſects, cropping buds, boring into the mud for worms, or perhaps for earthy liquor alone, and ſearching ants' neſts for the eggs. If they be difficult to enſnare, they are eaſy to ſhoot; for they ſuffer a perſon to come very near them*, and, though

* Thoſe who have judged of the Hoopoe from mythology, have repreſented it as very ſhy, and as ſeeking the heart of foreſts and

though they fly with ſudden jerks and in a tortuous courſe, their motion is ſlow. They flap their wings in launching off, like the lapwing *; and when they alight on the ground they walk with an even pace, like common hens.

They leave our northern climate about the end of Auguſt, or the beginning of autumn, and never ſtay till the cold ſets in. But though they are birds of paſſage in Europe, it may happen in certain caſes that ſome remain through the winter; ſuch, for inſtance, as are wounded, or ſick, or too young, or in ſhort too feeble to undertake the diſtant voyage. Theſe Hoopoes, which are thus left behind, will continue to lodge in the ſame holes where they neſtled; they will paſs the winter in a half-torpid ſtate, requiring little food, and being hardly able to repair the loſs of feathers occaſioned by moulting. Some hunters, diſcovering them in that condition, have aſſerted that all the Hoopoes winter in hollow trees, benumbed, and diveſted of plumage †, as has been ſaid of the cuckoo, with as little foundation.

the ſummits of mountains, to avoid man. Sportſmen aſſure me that this bird will not ſuffer them to get quite ſo near it in autumn; it having then, no doubt, acquired a little more experience.

* Its reſemblance, in its flight and in its creſt and its ſize, to the lapwing, is certainly the cauſe why the ſame name Hoop has been applied to both birds.

† Albertus, and Schwenckfeld. It is for this reaſon, ſays Agricola, that they are ſeen in the ſpring almoſt featherleſs.

According

According to ſome, the Hoopoe was among the Egyptians eſteemed an emblem of filial piety; they took care, it was ſaid, of their aged parents, cheriſhed them under their wings, and in caſe of a tedious moulting, lent them aſſiſtance in plucking the old feathers; they blew into their ſore eyes, and applied healing herbs, and in a word repaid all the endearments they had received in their tender infancy. Something of this kind has been alleged of the ſtork. Would to God that we could give the ſame amiable character of all other ſpecies of animals.

The Hoopoe lives only three years, according to Olina; but this muſt be in the domeſtic ſtate, where the term of life is abridged by improper food. It would be difficult to determine the extreme age of the free wild Hoopoe, particularly as it is a bird of paſſage.

As it has a great abundance of feathers, it appears thicker than in reality. It is about as large as a thruſh, and it weighs from two ounces and a half to three or four, more or leſs, according to its plumpneſs *.

Its creſt is longitudinal, conſiſting of two rows of equal and parallel feathers; thoſe in the middle of each row are longer than the reſt, ſo that when they are erect they form a kind of

* "With all its feathers," ſays Belon, "it looks like a very large pigeon, but when plucked it appears ſcarce bigger than a ſtare."

ſemi-circle of two inches and a half in height *. All theſe feathers are rufous, terminated with black; the middle ones, and thoſe next them, have a ſhade of white between theſe two colours. There are alſo ſix or eight feathers behind, which belong to the creſt, and which are entirely rufous, and are ſhorter than the others.

The reſt of the creſt, and all the fore part of the bird, are gray, verging ſometimes on wine colour, and ſometimes on rufous; the fore part of the back is gray, and the hind part is ſtriped tranſverſely with dirty white on a dark ground; there is a white ſpot on the rump; the ſuperior coverts of the tail are blackiſh; the belly and the reſt of the under ſide of the body are tawny white; the wings and tail are black ſtriped with white; the ground of the feathers is ſlate coloured.

All theſe different colours, thus ſpread over the plumage, form together a ſort of regular picture, which has a good effect when the bird erects its creſt, expands its wings, and raiſes and diſplays its tail; the part of the wings next the body then ſhews on each ſide a black and white croſs ſtripe, perpendicular to the axis of the body; the higheſt of theſe ſtripes has a ruſty caſt, and joins a horſe-ſhoe of the ſame colour traced on the back, the convex part of which approaches the white ſpot on the rump;

* Pliny, *Lib. X.* 29.

the

the loweſt, which hems one half of the circumference of the wing, runs into another broader bar, which croſſes the ſame wing two inches from its tip, and parallel to the axis of the body; this laſt white ſtripe correſponds alſo to a creſcent * of the ſame colour that interſects the tail at an equal diſtance from the end, and forms the frame of the picture: laſtly, if we conceive the whole crowned by a raiſed tuft of gold colour edged with black, we ſhall have a much better idea of the plumage than could be got by deſcribing each feather ſeparately.

All the white bars which appear on the upper face of the wing appear alſo on the lower face, ſo that the bird has the ſame aſpect when ſeen flying over head, except that the white is leſs tarniſhed or mixed with ruſty.

I have ſeen a female, diſcovered to be ſuch by diſſection, which had all the ſame colours, and thoſe equally diſtinct; perhaps it was of an advanced age. It was rather larger than the male, though the authors of the Italian Ornithology aſſert the contrary.

Total length about eleven inches; the bill two inches and a quarter (more or leſs according to the age of the bird) ſlightly arched; the tip of the upper mandible projects a little beyond that of the lower mandible, and they are both pretty ſoft; the noſtrils are oblong, and

† When the tail is entirely ſpread, this creſcent changes into a ſtraight bar.

hardly

hardly ſhaded; the tongue is very ſhort, almoſt loſt in the gizzard, and forming a ſort of equilateral triangle, whoſe ſides are not three lines in length; the ears are placed five lines from the opening of the bill, and in the ſame continuation; the tarſus is ten lines; the middle toe is joined to the outer toe by the firſt phalanx; the hind toe is longer and ſtraighter, eſpecially in old ſubjects; the alar extent above ſeventeen inches, the tail near four inches, conſiſting of ten equal quills (and not twelve, as Belon aſſerts), and projecting twenty lines beyond the wings, which have nineteen quills, the firſt being the ſhorteſt, and the nineteenth the longeſt.

The inteſtinal tube, from the gizzard to the anus, is twelve or eighteen inches; the gizzard is muſcular, lined with a looſe membrane which projects like a ſcabbard into the *duodenum*; the great diameter of the gizzard is from nine to fourteen lines; the ſmaller diameter from ſeven to twelve lines, and theſe parts are larger in the young birds than in the old ones. They have all a gall bladder, though but ſlight veſtiges of a *cæcum*; at the angle of the bifurcation of the *trachea arteria*, there are two holes covered by a very fine membrane; the two branches of the *trachea arteria* are formed behind by a ſimilar membrane, and before by cartilaginous ſemicircular rings; the elevator muſcle of the creſt is implanted between the crown of the head and the baſe of the bill; when it is drawn back, the

the tuft riſes, and when drawn towards the bill it collapſes.

In the female which I opened on the 5th of June, there were eggs of different ſizes, the largeſt of which was a line in diameter [A].

VARIETIES of the HOOPOE.

THE ancients ſaid that this bird was liable to change its colour in different ſeaſons, which might be occaſioned by moulting. But people who have reared Hoopoes have not perceived this alteration.

Belon mentions his knowing two ſpecies, though he does not aſſign their diſcriminating qualities; unleſs, perhaps, *the handſome collar, partly black and partly white*, and *the reverted neck*, which do not belong to our ſpecies, were intended to mark the diſtinction.

Commerſon and Sonnerat have brought a Hoopoe from the Cape of Good Hope very like ours, and which the traveller Kolben had found long before in the neighbourhood of the Cape. It has, upon the whole, the ſame plumage, the ſame ſhape, the ſame cry, the ſame gait, and eats nearly the ſame food; but on a cloſer inſpection it will be perceived that it is rather ſmaller, its legs

[A] Specific character of the *Upupa-Epops*: "It is variegated and creſted."

longer,

longer, its bill ſhorter in proportion, its tuft lower, and that there is no trace of white on the feathers that form the tuft; and in general, there is leſs variety in its plumage.

In another ſubject brought from the ſame country, the top of the back was of a pretty deep brown, and the belly variegated with white and brown; it was certainly a young one, for it was ſmaller than the reſt, and its bill five lines ſhorter.

Laſtly, the Marquis Gerini ſaw at Florence, and again on the Alps, near the town of Ronta, a very beautiful variety, whoſe tuft was edged with ſky-blue.

FOREIGN BIRD,

WHICH IS RELATED TO THE HOOPOE.

The BLACK and WHITE HOOPOE of the CAPE OF GOOD HOPE *

Upupa Capenſis, Gmel.
The *Madagaſcar Hoopoe*, Lath.

THIS bird is diſtinguiſhed from our Hoopoe, and its varieties, by its ſize; by its ſhort and pointed bill; by its creſt, of which the feathers are lower in proportion, and alſo looſe, as in the tufted cuckoo of Madagaſcar; by the number of quills in its tail, of which there are twelve; by the ſhape of its tongue, which is pretty broad, and the extremity divided into many threads; and laſtly, by the colours of its plumage. The creſt, the throat, and all the under ſide of the body, are white, without any ſpots; the upper ſide of the body, from the creſt excluſively to the end of the tail, is brown, whoſe ſhades vary, and are much leſs intenſe on the fore parts; there is a white ſpot on the

* The bird of Madagaſcar, which Flacourt names *Tivouch*, ſeems to have ſome affinity to this: its head is ornamented with a beautiful creſt, and its plumage conſiſts of two colours, black and gray; we may ſuppoſe that this is light gray.

wing;

wing; the iris is of a bluiſh brown; the bill, the legs, and even the nails, are yellowiſh.

This bird inhabits the great foreſts of Madagaſcar, of the iſle of Bourbon, and of the Cape of Good Hope. In its ſtomach are found the ſeeds and berries of the *pſeudo-buxus*; its weight is four ounces, but varies much, and muſt be more conſiderable in the months of June and July, at which time the bird is very fat.

Total length ſixteen inches; the bill twenty lines, very pointed, the upper mandible having its edges ſcolloped near the tip, and its ridge very obtuſe; it is longer than the lower mandible, which is as broad; on the palate, which in other reſpects is very ſmooth, there are ſmall tuberoſities, varying in number; the noſtrils are like thoſe of the ordinary Hoopoe; and ſo are the feet, except that the hind nail, which is the largeſt of all, is very hooked; the alar extent is eighteen inches; the tail four inches ſix lines, conſiſting of nearly equal quills, but the two middle ones are rather ſhorter; it projects about two inches and a half beyond the wings, which have eighteen quills.

[A] Specific character of the *Upupa Capenſis*: "It is creſted and duſky, below white; a white ſpot on its wings."

The PROMERUPE.

Upupa Paradiſea, Linn. Gmel. and Bor.
Upupa Manucodiata, Klein.
Promerops Indicus Criſtatus, Briſſ.
Avis Paradiſiaca, criſtata, orientalis, rariſſima, Seba.
The *Creſted Promerops*, Lath.

THIS ſpecies naturally aſſumes a place between the Hoopoes and the Promerops, ſince it bears on its head a tuft of long feathers reclined, but which ſeem capable of being erected like thoſe of the Hoopoe; while, on the other hand, the exceſſive length of its tail marks an affinity with the Promerops.

Seba ſays that it comes from the eaſtern part of our continent, and that it is very rare; its throat, its neck, its head, and its beautiful large creſt, are of a fine black; its wings and its tail are of a light bay colour; its belly light cinereous; its bill and legs lead colour; and the bird is nearly as large as a ſtare.

Total length nineteen inches; the bill thirteen lines, a little arched, and very ſharp; the tarſus about nine lines; the wings ſhort; the tail, fourteen inches and a quarter, conſiſting of very unequal quills, the two middle ones exceeding the lateral ones by eleven inches and the wings by thirteen.

[A] Specific character of the *Upupa Paradiſea*: "It is creſted and cheſnut; its two tail-quills very long."

The BLUE-WINGED PROMEROPS.

Upupa Mexicana, Gmel.
Promerops Mexicanus, Briſſ.
Avis Ani Mexicana, cauda longiſſima, Seba.
The *Mexican Promerops*, Lath.

THIS Promerops is attached to lofty mountains: it feeds on caterpillars, flies, beetles, and other inſects. The prevailing colour of the upper part of its body is dull gray, changing into ſea-green and purpliſh-red; the tail is of the ſame colour, but of a deeper ſhade, and having fine gold reflections; the quills of the wings are of a light brilliant blue; the belly light yellow; the bill blackiſh, edged with yellow. The bird is of the ſize of a thruſh.

Total length eighteen inches and three quarters; the bill twenty lines, ſomewhat arched; the tarſus eight lines and a half; the wings ſhort; the tail twelve inches and a half, conſiſting of very unequal quills, the four middle ones being longer than the lateral ones; it exceeds the wings eleven inches.

The BROWN PROMEROPS with a Spotted Belly.

Upupa Promerops, Linn. and Gmel.
Merops Cafer, Linn. and Gmel.
Promerops, Briſſ.
The *Cape Promerops*, Lath.

THE belly is ſpotted with brown upon a whitiſh ground; and the breaſt ſpotted with brown upon an orange-brown ground; the throat is dirty white, having on each ſide a brown line, which riſes from the opening of the bill, paſſes under the eye, and deſcends upon the neck; the crown of the head is brown, variegated with ruſty gray; the rump and the ſuperior coverts of the tail are olive green; the reſt of the upper ſide of the body, including the quills of the tail and of the wings, are brown; the thighs are brown; the inferior coverts of the tail are of a fine yellow; the bill and legs black.

The one figured, No. 637, *Planches Enluminées*, appears to be the male, ſince it is more ſpotted, and its colours better contraſted; there is a very narrow gray ſtripe on the wings, formed by a ſucceſſion of ſmall ſpots that terminate the upper coverts. The ſubject deſcribed by Briſſon wants this ſtripe, its colours are feebler, and the under ſide of its body is leſs ſpotted; I ſuppoſe it to be a female; it was an eighteenth

part leſs than the male, and was ſcarcely larger than a lark.

Total length of the male eighteen inches; the bill ſixteen lines; the tarſus ten lines and two-thirds; the wings ſhort; the alar extent thirteen inches; the tail thirteen inches, conſiſting of twelve quills, of which the ſix middle ones are much longer than the ſix lateral ones, which are tapered; it exceeds the wings eleven inches [A].

The STRIPED-BELLIED BROWN PROMEROPS.

Merops Fuſca, Gmel.
The *New Guinea Brown Promerops*, Lath.

THIS bird was brought from New Guinea by Sonnerat. In the male the throat, the neck, and the head, are of a fine black, that on the head gloſſed like burniſhed ſteel; all the upper part of the body is brown, with a tinge of deep green on the neck, back, and wings; the tail is of a more uniform and lighter brown, except the laſt of the lateral quills, which is black on the inſide; the breaſt and all the under ſide of the body are ſtriped tranſverſely with black and white; the iris and legs are black.

[A] Specific character of the *Upupa Promerops*: "It has ſix tail-quills, the middle ones very long."

I have

ROYAL ASIATIC SOCIETY

N°. 158

THE RING-BELLIED FROMEROPS

I have ſeen one which had a rufous ſhade on the head. In the female, the throat, the neck, and the head, are of the ſame brown with the upper ſide of the body, and without any reflections; in every other reſpect it reſembles the male.

Total length twenty-two inches; the bill two inches and a half, ſtraight, round, and very much arched; the tail is thirteen inches, conſiſting of twelve tapered quills, very unequal, the ſhorteſt being four inches, and the longeſt exceeding the wings nine lines.

The GREAT PROMEROPS, with Frizled Flounces*.

Upupa Magna, Gmel.
Upupa Superba, Lath. Ind.
The *Grand Promerops*†, Lath. Syn.

THE frizled flounces which at once decorate and characterize this ſpecies‡, conſiſt of two thick tufts of frizled ſoft feathers, painted

* *Paremens*, i. e. Protuberant decorations in general.

† *Voyage a la Nouvelle Guinée*, p. 166. The name of *four-winged*, which has been given by voyagers to an African bird of prey, would agree very well with this Promerops.

‡ The whiſtler, deſcribed in a former part of this work, has alſo a ſort of flounces, but neither their form, nor the feathers of which they conſiſt, are the ſame; and thoſe of the ſuperb paradiſe bird have a contrary direction.

with the moſt beautiful colours, which project on either ſide of the body, and give the bird a diſtinguiſhed figure. Theſe bunches of plumage are compoſed of the long coverts of the wings, which are nine in number, that riſe bending on their upper ſide, where the feathery fibres are very ſhort, and diſplay with more advantage the long fibres of the under ſide, which now becomes the convex ſide; the middle coverts of the wings, of which there are fifteen, and even ſome of the ſcapular feathers, partake of this ſingular arrangement, and riſe into a fan-ſhape, their extremity ornamented with an edging of brilliant green, changing into blue and violet; which forms a kind of garland on the wings, ſpreading ſomewhat as it riſes to the back.

In all the reſt of the plumage the prevailing colour is gloſſy black, enriched with blue and violet reflections; and all the feathers, ſays Sonnerat, have the ſoftneſs of velvet, not only to the eye, but to the touch: he adds that the body, though of a long ſhape, appears ſhort and exceedingly little, compared with the great extent of its tail; the bill and legs are black. Sonnerat brought this bird from New Guinea.

Total length three feet and a half (four according to Sonnerat); the bill near three inches; the wings ſhort; the tail twenty-ſix or twenty-ſeven inches, conſiſting of twelve tapered quills, which are broad and pointed, the ſhorteſt being ſix or ſeven inches, the longeſt exceeding the wings about twenty inches.

The ORANGE PROMEROPS.

Upupa Aurantia, Gmel.
Promerops Barbadenſis, Briſſ.
Avis Paradiſiaca Americana elegantiſſima, Seba.

THE prevailing colour is orange, which receives different tints in different parts; a gold tint on the throat, the neck, the head, and the bill; a reddiſh tint on the quills of the tail and on the great quills of the wings; and laſtly, a yellow tint on all the reſt of the plumage; the baſe of the bill is ſurrounded with ſmall red feathers.

Such, I conceive, to be the male of this ſpecies, which is nearly as large as the ſtare; I reckon the cochitototl * of Fernandez to be the female, which is of the ſame ſize, inhabits the ſame country, and whoſe plumage differs not more from the Orange Promerops than in many ſpecies the plumage of the male differs from that of the female. The throat, the neck, the head, and the wings, are variegated, without any regularity, with cinereous and black; all the reſt of the plumage is yellow; the iris is pale yellow; the bill is black, ſlender, arched, very pointed; and the legs are cinereous. The bird lives upon ſeeds and inſects, and is found in the hotteſt

* *Upupa Aurantia*, Var. Gmel.
Promerops Mexicanus Luteus, Briſſ.

parts of Mexico, where it is neither eſteemed for the beauty of its ſong nor the delicacy of its fleſh. The orange Promerops, which I ſuppoſe to be the male of the ſame ſpecies, occurs in the north of Guiana, in the ſmall iſlands formed at the mouth of the river Berbice *.

Total length of the bird about nine inches and a half; the bill thirteen lines; the tarſus ten; the tail near four inches, conſiſting of equal quills, and exceeds the wings about an inch [A].

* Seba ſays, *in inſulis Barbicenſibus*, which I think ſhould be tranſlated the iſlands of Berbice, and not the iſlands of Barbadoes.

[A] Specific character of the *Upupa Aurantia*: "It is fulvous; its head and neck gold-coloured; its tail equal."

The BAKER.

Le Fournier, Buff.
Merops Rufus, Gmel.
The *Rufous Bee-eater*, Lath.

THIS is the name which Commerſon has given to this American bird, which forms the ſhade between the Promerops and the Bee-eaters. It differs from the Promerops, as its toes are longer and its tail ſhorter: it differs from the Bee-eaters, becauſe it has not, like them, its outer toe joined and as it were ſoldered into the middle toe almoſt its whole length. This bird is found in Buenos Ayres.

Rufous is the prevailing colour of its plumage, which is deeper on the upper parts, much lighter and verging on pale yellow on the lower parts; the quills of the wing are brown, with ſome rufous tints, more or leſs intenſe, on the outer edge.

Total length eight inches and a half; the bill twelve or thirteen lines; the tarſus ſixteen lines; the hind nail the ſtrongeſt; the tail rather leſs than three inches, and exceeds the wings about an inch.

[A] Specific character of the *Merops Rufus*: "It is rufous; its wing-quills brown, rufous on their outer-edge."

The POLOCHION*.

Merops Moluccenſis, Gmel.
The *Molucca Bee-eater*, Lath. Syn.

POLOCHION is the name, and the inceſſant cry, of this Molucca bird; it ſits on the higheſt branches and continually repeats it, and this word, in the language of thoſe iſlands, invites to love and pleaſure. I range it between the families of the Promerops and of the Bee-eaters, becauſe it has the bill of the latter, and the feet of the former.

All its plumage is gray, but this colour is deeper on the upper parts, and lighter on the under; the cheeks black; the bill blackiſh; the eyes encircled by a naked ſkin; the back of the head variegated with white; the feathers of the tuft make a re-entrant angle on the front, and thoſe at the origin of the neck terminate in a kind of ſilk. The ſubject which Commerſon deſcribed came from the iſland of Bouro, one of the Moluccas belonging to the Dutch; it weighed five ounces, and was nearly as large as the cuckoo.

Total length fourteen inches; the bill very pointed, two inches long, five lines broad at its baſe,

* This word, in the language of the Moluccas, ſignifies *let us kiſs*; and M. Commerſon therefore propoſes to call it *Philemon*, or *Philedon*, or *Deoſculator*. I think it better to retain the original name, eſpecially as it expreſſes the cry of the bird.

baſe, two lines at its middle, and ſeven lines thick at its baſe, three and a half at the middle, its edges ſcallopped near the point; the noſtrils oval and open, inveſted by a membrane behind, and placed nearer to the middle of the bill than to its baſe; the tongue equal to the bill, terminated by a pencil of hair; the middle toe joined at its baſe to the outer toe; the hind one ſtrongeſt; the alar extent eighteen inches; the tail five lines and two thirds, conſiſting of twelve quills, which are equal, except that the outer pair are rather ſhorter than the reſt; it projects three inches beyond the wings, which conſiſt of eighteen quills; the outer one is one half ſhorter than the three following, which are the longeſt of all [A].

The RED and BLUE MEROPS.

Merops Braſilienſis, Gmel.
Apiaſter Braſilienſis, Briſſ.
Pica Braſilienſis amæniſſimis coloribus, Seba.
The *Braſilian Bee-eater*, Lath.

SEBA, from whom we borrow the account of this bird, ſeems to have been charmed with its plumage. Ruby colour ſparkles on its head, on its throat, and on all the under ſide of the

[A] Specific character of the *Merops Moluccenſis:* "It is gray; its orbits naked; its cheeks black; its tail nearly equal."

body;

body; it alſo appears on the upper coverts of the wings, but of a deeper hue; a light brilliant blue is ſpread on the quills of the wings and on thoſe of the tail; the luſtre of theſe fine colours is heightened by the contraſt of darker ſhades, and by black and white ſpaces ſcattered on the upper ſurface; the bill and legs are yellow, and the wings are lined with the ſame colour; the red feathers of the under ſide of the body are of a ſilky nature, as ſoft to the feel as they are brilliant to the eye.

This bird is a native of Brazil, if we believe Seba, who in matters of this kind can hardly ever be relied on. It is nearly as large as the Bee-eater; its legs too are as ſhort, but I can perceive nothing either in the deſcription or figure that ſhews the toes to be placed in the ſame way: its bill is more analogous to that of the Promerops, for which reaſon I make it an intermediate ſpecies.

[A] Specific character of the *Merops Braſilienſis*: "It is fire-coloured, above variegated with brown and black; its tail and wing-quills pale blue."

ROYAL ASIATIC

N.° 159

THE COMMON BEE-EATER.

The BEE-EATER.

Le Guepier *, Buff.
Merops Apiaſter, Linn. and Gmel.
Merops, Geſner. Aldrov. Ray, &c.
Merops Galilæus, Haſſelquiſt.
Apiaſter, Briſſ.
Iſpida cauda molli, Kram.
Gnat-Snapper, Kolben †.

THIS bird feeds not only upon common bees and waſps, but alſo upon humble-bees, locuſts, gnats, flies, and other inſects, which it catches like the ſwallows on the wing. Such are the prey to which it is moſt attached, and which ſerve the boys of the iſland of Candia as baits for lines to fiſh it in the air; they paſs a bent pin through the body of a living locuſt, and faſten to it a long thread; the Bee-eater flies at it, and ſwallows it with the hook. When inſects fail, it contents itſelf with ſmall ſeeds, and even wheat ‡; and, in collecting that

* i. e. *Waſp-eater.*

† Ariſtotle calls the Bee-eater Μεροψ, which Pliny writes in Roman characters *Merops*: it was alſo termed Αεροψ, Φλωρος, Μελισσοφας, contracted for Μελισσοφαγος (honey-eater), and in Latin *Apiaſter*, from *Apis*, a bee. In Italy it has the appellations, *Dardo, Dardaro, Barbaro, Gaulo, Jevolo, Lupo dell' Api* (bee-wolf): In Sicily, *Piccia Ferro* (iron-bill): In Spain, *Juruco*: In Germany, *Bienen-Freſſer* (bee-eater); *Heu-Vogel* (hay bird); and *Gelber Bienen-Wolf* (the yellow bee-wolf): In Auſtria, *Meer-ſchwalbe* (the ſea-ſwallow): In Poland, *Zotna, Zotcawa.*

‡ The only one I had occaſion to open with Dr. Remond had five

that food on the ground, it ſeems alſo to gather ſmall pebbles like all the granivorous birds, and with the ſame view. Ray ſuſpects, from many analogies, both internal and external, that the Bee-eater, as well as the king-fiſher, feeds ſometimes on fleſh.

The Bee eaters are very common in the iſland of Candia, inſomuch that Belon, who was an eye-witneſs, ſays that they are ſeen flying in every part of it. He adds that the Greeks on the main land are unacquainted with it, which he could accurately learn from his travelling in that country; but he aſſerts, on too ſlight foundations, that they are never ſeen in Italy; for Aldrovandus, who was a citizen of Bologna, aſſures that they were common in the neighbourhood of that city, where they were uſually caught both with nets and lime-twigs. Willughby ſaw them frequently at Rome, expoſed to ſale in the public markets; nor is it probable that they are ſtrangers to the reſt of Italy, ſince they are found in the ſouth of France, where they are not regarded even as birds of paſſage *. Thence they ſometimes penetrate in ſmall flocks

five large drones in its throat: Belon found, in the ſtomach of thoſe which he opened, rape, parſley, and colewort ſeeds, wheat, &c.

* Belon doubts whether they remain the whole winter in the iſle of Candia, but he had no obſervation on that head. What I have ſaid of thoſe of Provence was communicated by the [illegible] de Piolenc. I know not why Friſch ſays that theſe birds are fond of deſerts.

of

of ten or twelve into the more northern provinces; and we ſaw one of theſe flocks that had arrived in the vale of Sainte-Reine in Burgundy, on the 8th of May 1776: they kept conſtantly together, and called inceſſantly on each other; their cry was very noiſy but agreeable, and reſembled ſomewhat the whiſtling that one might make with a bored nut*; they emitted it both when perched and when on the wing; they preferred the fruit trees which were then in bloſſom, and conſequently frequented by the bees and waſps; they often dived from the branch to catch the little winged prey; they appeared always very timorous, and ſcarce ſuffered a perſon to get near them: however one was ſhot ſeparate from the others, perched upon a fir; the reſt of the flock, which were in a neighbouring vineyard, frighted at the report, flew away all ſcreaming together, and took ſhelter among ſome cheſnuts that were at a little diſtance; they continued to harbour among the vineyards, but in a few days they took their final departure.

* Belon compares it to "the ſound that a man would make by contracting his mouth into a round aperture and whiſtling *grulgru-rurul* as loud as an oriole." Others pretend that it ſeems to ſay *crou, crou, crou.* The author of the poem Philomela repreſents its ſong as reſembling much that of the gold creſted wren and of the ſwallow.

Regulus atque Merops & rubro pectore Progne
Conſimili modulo zinzibulare ſolent.

But it is well known that almoſt always the naturaliſt muſt in ſome meaſure modify the expreſſions of the poet.

Another

Another flock was ſeen in June 1777, in the vicinity of Anſpach *. Lottinger informs me that theſe birds ſeldom appear in Lorraine, that there are never more than two together, that they ſit on the longeſt branches of trees and ſhrubs, and ſeem to feel embarraſſed, as if they had ſtrayed. They appear ſtill ſeldomer in Sweden, where they haunt the ſea-coaſt †. But they hardly ever viſit England, though not ſo far north as Sweden, and to which they could eaſily paſs from Calais ‡. In the eaſt, they are ſpread through the temperate zone, from India § to Bengal ||, and undoubtedly farther, though their courſe has not been traced.

Theſe birds neſtle, like the ſhore ſwallow and the king-fiſher, in the bottom of holes, which they form with their ſhort and ſtrong feet and their iron bill, as the Sicilians term it, in the hillocks where the ſoil is looſe, and ſometimes in the ſhelving ſandy brinks of large rivers ¶: theſe holes are made more than ſix inches deep and as wide. The female depoſits, on a bedding of moſs, four or five, or even ſix or ſeven white eggs, rather ſmaller than thoſe of the blackbird. But their economy in theſe dark caverns cannot be obſerved; we know only that the young fa-

* La Gazette d'Agriculture, No. 55, *année* 1777.
† Fauna Suecica. ‡ Charleton and Willughby.
§ M. Haſſelquiſt ſays that they occur in the woods and plains between Acre and Nazareth.
‖ Edwards. ¶ Ariſtotle, and Kramer.

mily

mily does not diſperſe; indeed ſeveral families muſt unite to form thoſe numerous flocks which Belon ſaw in the iſland of Candia, ſettled among the ridges of the mountains, where the abundance of thyme affords rich paſture to the bees and waſps.

The flight of the Bee-eater has been compared to that of the ſwallow, which we have ſeen to reſemble it in many other reſpects; it is alſo analogous to the king fiſher, particularly in the beautiful colours of its plumage, and in the ſingular conformation of its feet; and laſtly Dr. Lottinger, who is a cloſe and accurate obſerver, finds that, in ſome particulars, it is akin to the goat-ſucker.

A property which, were it well aſcertained, would diſtinguiſh this bird from every other, is the habit, aſcribed to it, of flying backwards. Ælian mightily admires this *; but he had better called it in queſtion, for it is an error ariſing from ſome overſight. Such too is the filial piety that has been ſo liberally beſtowed on birds, but moſt remarkably on the Bee-eater; ſince, if we believe Ariſtotle, Pliny, Ælian, and thoſe who have copied them, the young ones do not wait till the parents need their aſſiſtance; as ſoon as they are flown they give a cheerful attendance, and carry proviſions to their holes. It is eaſy to ſee that theſe are fables, but the moral at leaſt is good.

* *De Nat. Anim.* Lib. I. 49.

The

The male has ſmall eyes, though of a vivid red, and which derive additional luſtre from a black bar; the front is of a ſea-green; the upper ſide of the head is cheſnut tinged with green; the hind part of the head and of the neck is cheſnut, without any admixture, but which grows continually more dilute as it approaches the back; the upper ſide of the body is of a pale fulvous, with green and cheſnut reflections, which are more or leſs apparent, according to the poſition; the throat is of a ſhining gold-yellow, terminated in ſome ſubjects by a blackiſh collar; the fore part of the neck, the breaſt, and the under ſide of the body, are of a blue beryl, which grows lighter on the hind parts; the ſame colour is ſpread over the tail with a light rufous tinge, and on the outer edge of the wing without any admixture; it runs into green, and receives a ſhade of rufous on the part of the wings next the back; almoſt all the quills are tipt with black, their ſmall ſuperior coverts are tinged with dull green, the middle ones with rufous, and the great ones ſhaded with green and rufous: the bill is black, and the legs reddiſh brown (black according to Aldrovandus); the ſhafts of the quills of the tail are brown above and white below. Beſides, all theſe different colours are very variable, both in their tint and their diſtribution; and hence the difference among deſcriptions.

This bird is very nearly as large as the redwing,

redwing, its ſhape longer, and its back rather more convex. Belon ſays that nature has made it hunch-backed.

Total length ten or twelve inches; the bill twenty-two lines, broad at its baſe, a little arched; the tongue thin, terminated by long threads, the noſtrils ſhaded by a ſort of ruſty hairs; the tarſus five or ſix lines, and pretty thick in proportion to its length; the outer toe adheres to the middle one almoſt its whole length, and to the inner one by its firſt phalanx only, as in the king-fiſher; the hind nail is the ſhorteſt of all and the moſt hooked; the alar extent ſixteen or ſeventeen inches; the tail four inches and a half, conſiſting of ſix pairs of quills, of which the five lateral ones are equal; the middle pair projects nine or ten lines beyond them, and about eighteen lines beyond the wings, which conſiſt of twenty-four quills, according to ſome, and of twenty-two according to others: the one I obſerved contained twenty one quills.

The œſophagus three inches long, and dilates at its baſe into a glandulous bag; the ſtomach is rather membranous than muſcular, and of the ſize of an ordinary nut; the gall bladder is large and of an emerald colour; the liver is pale yellow: there are two *cæca*, the one fifteen lines, the other ſixteen and a half; the inteſ-

tinal tube could not be meaſured, being too much injured by the ſhot [A].

THE

YELLOW and WHITE BEE-EATER.

Merops Flavicans, Gmel.
Manucodiata Secunda Aldrovandi, Ray. and Will.
Apiaſter Flavicans, Briſſ.
The *Yellow Bee-eater*, Lath.

ALDROVANDUS ſaw this ſpecies at Rome; it is remarkable for the length of the two middle quills of its tail, and the proportional ſhortneſs of its bill; its head is white, variegated with yellow and gold colour; its eyes yellow; its eye-brows red; its breaſt reddiſh; its neck, its belly, and the under ſide of its wings, are whitiſh; its back yellow; its rump, its tail, and its wings, are of a bright rufous; its bill is greeniſh-yellow, ſomewhat arched, two inches long; and its tongue is long, and pointed nearly like that of woodpeckers.

This bird was much larger than the ordinary Bee-eater, and its alar extent was twenty inches; the two middle quills projected eight lines beyond the lateral ones. The Signior Cavalieri, to whom it belonged, was uncertain what country it commonly inhabits.

[A] Specific character of the common Bee-eater, *Merops Apiaſter*: "Its back is ferruginous, its belly and tail bluiſh-green, two of the tail-quills longer than the reſt, its throat yellow."

The GRAY-HEADED BEE-EATER.

Merops Cinereus, Linn. Gmel. and Klein.
Apiaſter Mexicanus, Briſſ.
Avicula de Quauhcilui, Seba.
The *Cinereous Bee-eater*, Lath.

PERHAPS this bird has nothing elſe American but the Mexican name *quauhicilui*, which Seba has been pleaſed to beſtow upon it. It is as large as the ſparrow of Europe, and is included in the genus of the Bee-eaters on account of the length and ſhape of its bill, the length of the two middle quills of the tail, and by the thickneſs and ſhortneſs of its legs. It probably reſembles alſo in the diſpoſition of its toes.

Its head is of a fine gray; the upper ſide of its body the ſame, variegated with red and yellow; the two long middle quills of its tail are pure red; its breaſt and all the under ſide of its body are orange yellow, and the bill is of an handſome green.

Total length nine or ten inches; the bill and tail occupy the one half of it.

[A] Specific character of the *Merops Cinereus*: "It is variegated with red and yellow, below reddiſh-yellow; two of its tail-quills very long and red."

THE

GRAY BEE-EATER of ETHIOPIA.

Merops Caffer, Linn. and Gmel.

LINNÆUS is the only naturaliſt who has taken notice of this ſpecies, which he does from a drawing of Burmann. His indication, to which I can add nothing, is, that the plumage is gray; that there is a yellow ſpot near the anus; and that its tail is very long.

THE

CHESNUT and BLUE BEE-EATER.

Merops Badius, Gmel.
Merops Caſtaneus, Lath. Ind.
Apiaſter ex Franciæ Inſulâ, Briſſ.
The *Cheſnut Bee-eater*, Lath. Syn.

CHESNUT predominates on the anterior parts of the upper ſide of the body, including the top of the back, and beryl on the reſt of the upper ſide of the body, and on all the lower part, but which is much more beautiful and more conſpicuous on the throat, the fore part of the neck, and the breaſt, than any where elſe; the wings are green above, fulvous below, terminated with blackiſh; the tail is of a pure blue; the bill black; and the legs reddiſh.

This

This bird is found in the Iſle of France; it is hardly larger than the creſted lark, but much longer.

Total length near eleven inches; the bill nineteen lines; the tarſus five and a half; the hind toe the ſhorteſt of all; the alar extent fourteen inches; the tail five inches and a half, conſiſting of twelve quills, of which the two middle ones project two inches and two lines beyond the lateral ones, and three inches and a half beyond the wings; theſe conſiſt of twenty-four quills, of which the firſt is the ſhorteſt, and the third the longeſt.

VARIETY.

THE Cheſnut and Blue Bee-eater of Senegal is a variety produced by climate. No more than theſe two colours are found in the whole of its plumage, but their diſtribution is different from that of the preceding. The cheſnut is ſpread on the coverts and the quills of the wings, except the quills next the back, and on the quills of the tail, except the projecting part of the two middle ones, which is blackiſh.

This Bee-eater is found in Senegal, whence it was brought by Adanſon. Its total length is about a foot, and it has nearly the ſame proportions as that from the Iſle of France.

The PATIRICH.

Merops Superciliosus, Linn. and Gmel.
Apiaster Madagascarienſis, Briſſ.
The *Supercilious Bee-eater*, Lath.

THE natives of Madagaſcar call this bird *Patirich tirich*, which is manifeſtly formed from its cry, and which I have ſhortened and retained. The principal colour of its plumage is dull green, changing into brilliant cheſnut on the head, not ſo dark on the upper ſide of the body, growing more dilute on the hind parts, ſtill lighter on the lower parts, and continually melting away towards the tail: the wings are terminated with blackiſh; the tail is dull green; the throat is yellowiſh white at its origin, and fine cheſnut at its lower part. But what beſt characterizes this bird and gives it a ſingular aſpect, is a broad blackiſh bar, edged round its whole circumference with greeniſh white; this border bends about the baſe of the bill and graſps the origin of the neck, aſſuming a yellowiſh tinge, as I have before ſaid; the bill is black, and the legs are brown. This bird is found in Madagaſcar; it is rather larger than the cheſnut and blue Bee-eater.

Total length eleven inches and one-third; the bill twenty-one lines; the tarſus five lines; the hind toe the ſhorteſt; the alar extent fifteen

teen inches and two thirds; the tail five inches and a half, conſiſting of twelve quills; the two middle ones project more than two inches beyond the lateral ones, and two inches and three quarters beyond the wings, which conſiſt of twenty-four quills, of which the firſt is very ſhort, and the twelfth is the longeſt.

I have ſeen another Bee-eater from Madagaſcar, much like this in regard to the ſize, the colours of the plumage, and their diſtribution, though leſs contraſted; the bill was weaker, and the two middle quills of the tail exceeded not the lateral ones. It was undoubtedly a variety occaſioned by age or ſex; its bar was edged with beryl, and the rump and tail were of the ſame colour as in the ſubject brought home by Sonnerat; but in the latter, the two middle quills of the tail were very narrow and much longer than the lateral ones [A].

[A] Specific character of the *Merops Superciliosus*: "It is green, "a white line on its front above and below the eyes, its throat "yellowiſh, two of its tail quills elongated."

The GREEN BLUE-THROATED BEE-EATER.

Merops Viridis, Linn. Gmel. and Bor.
Apiaſter Madagaſcarienſis Torquatus, Briſſ.
The *Indian Bee-eater*, Edw. Penn. and Lath.

A LITTLE accident which happened to a bird of this ſpecies, long after it was dead, affords an inſtance of the miſtakes which are apt to embarraſs the nomenclature. It belonged to Mr. Dandridge, and was deſcribed, delineated, engraved, and coloured by two Engliſh naturaliſts, Edwards and Albin; a Frenchman, well ſkilled in ornithology, and though he had a ſpecimen beſide him, has ſuppoſed that theſe two figures have repreſented two diſtinct ſpecies, and has in conſequence deſcribed them ſeparately and under different denominations.

The bird of Mr. Dandridge obſerved by Edwards was one-third ſmaller than the European Bee-eater, and the two middle quills of its tail were much longer and narrower; the front was blue, there was a great ſpot of the ſame colour on the throat, included in a ſort of black frame formed below by a half-collar like a reverſed creſcent, and above by a bar which paſſed over the eyes and deſcended on both ſides of the neck, ſtretching towards the two extremities of the half collar; the upper ſurface of the head and neck was orange; the back, the ſmall coverts, and the laſt quills

quills of the wings, were green, like the plumage of the parrot; the ſuperior coverts of the tail were beryl blue; the breaſt and belly were light green; the thighs reddiſh brown; the inferior coverts of the tail dull green; the wings variegated with green and orange, and terminated with black; the tail of a fine green above and dark green below; the two middle quills exceeding the lateral ones by more than two inches, and the projecting part deep brown and very narrow; the ſhafts of the quills of the tail very brown, and ſo were the legs; the bill, black above, and whitiſh below, at its baſe.

In the ſubject deſcribed by Briſſon, which is alſo delineated in the *Planches Enluminées*, there was no blue on the front, and the green of the under ſide of the body partook of the beryl caſt; the upper ſide of the head and of the neck was of the ſame gold green as the back; in general, there was a tint of gold yellow thrown looſely on the whole of the plumage, except on the quills of the wings and the ſuperior coverts of the tail; the black bar did not extend acroſs the eyes, but below them. Briſſon has remarked beſides, that the wings were lined with fulvous, and that the ſhafts of the tail, which were brown above, as in Edwards' bird, were whitiſh beneath. Laſtly, there were ſeveral quills and coverts of the wings, and many quills of the tail, edged near the end and tipt with gold yellow. But it is obvious

obvious that all theſe minute differences are not more than might be expected in individuals of even the ſame ſpecies, but only diverſified by age or ſex; the ſlight variation of ſize may be imputed to the ſame cauſes.

The bird called by Briſſon *the little Philippine Bee-eater*, is of the ſame ſize and plumage with the collared Bee-eater of Madagaſcar; the chief difference remarked between them is, that in the former the two middle quills of the tail, inſtead of being longer than the lateral ones, are, on the contrary, rather ſhorter. But Briſſon himſelf ſuſpects that theſe middle quills were not yet fully grown, and that in thoſe ſubjects where they were complete they projected far beyond the lateral ones: this is the more probable, as theſe two middle quills appear, in the preſent caſe, to be different from the lateral ones, and even nearly akin to the projecting part of the middle quills in the blue-throated green Bee-eater. The other differences are, theſe; that the bar was not black, but of a dull green, and that the legs were brown red: but ſtill it ought to be referred to the ſame ſpecies. This bird is ſpread from the coaſt of Africa to the moſt eaſtern of the Aſiatic iſlands; it is nearly as large as our ſparrow.

Total length ſix inches and a half, (probably it would be about eight inches and three quarters, as in the blue-throated green Bee-eater, if the two middle quills had been fully grown) the bill

bill fifteen lines; the tarſus four lines and a half; the alar extent ten inches; the ten lateral quills of the tail two inches and a half, exceeding the wings fourteen lines [A].

The GREEN and BLUE YELLOW-THROATED BEE-EATER, *Buff.*

Merops Chryſocephalus, Gmel.
The *Yellow-throated Bee-eater*, Lath.

THIS is a new ſpecies introduced by Sonnerat. It is diſtinguiſhed from the preceding in its plumage, its proportions, and above all, in the length of the middle quills of the tail; its throat is of a fine yellow, which extends on the neck under the eyes, and even farther, and is terminated with blue in its lower part; the front, the eye-brows, and all the under part of the body, are glaucous; the quills of the wings are green, edged with glaucous from their middle; their ſmall ſuperior coverts are dun green, ſome ſnuff-coloured, the longeſt next the body are of a light yellow; the upper ſide of the head and neck is ſnuff-coloured; all the upper ſide of the body gold green; the ſuperior coverts of the tail green.

[A] Specific character of the *Merops Viridis:* "It is greeniſh, a black ſtripe on its breaſt, its throat and tail blue, two of its tail quills elongated."

Total

Total length ten inches; the bill twenty lines; the tarſus ſix lines; the hind nail the ſhorteſt and moſt hooked; the tail four inches and a quarter, conſiſting of twelve quills, the ten lateral ones nearly equal to each other; the two middle ones exceed the lateral ones by ſeven or eight lines, and the wings by eighteen.

The LITTLE GREEN and BLUE TAPER-TAILED BEE-EATER.

Merops Angolenſis, Gmel.
Apiaſter Angolenſis, Briſſ.
The *Angola Bee-eater*, Lath.

Its ſmallneſs is not the only property that diſtinguiſhes this from the preceding; it differs alſo in the colour of its head, in its proportions, and, above all, by the conformation of its tail, which is tapered, and of which the two middle quills do not project much. With regard to its plumage, the upper ſurface is gold green, the under beryl blue; the throat is yellow; the fore part of the neck, cheſnut; there is, acroſs the eyes, a zone dotted with black; the wings and tail are of the ſame green as the back; the iris is red; the bill black, and the legs cinereous:—Theſe are the chief colours of this bird, which is the ſmalleſt of the Bee-eaters. It

is

is found in the kingdom of Angola in Africa; it is the only one of the genus that has a tapered tail.

Total length about five inches and a half; the bill nine lines; the tarſus four lines and a half; the hind toe the ſhorteſt; tail two inches and more, conſiſting of twelve quills; it exceeds the wings about an inch.

The AZURE-TAILED GREEN BEE-EATER, *Buff.*

Merops Philippinus, Gmel.
Apiaſter Philippinenſis Major, Briſſ.
The *Philippine Bee-eater*, Lath.

All the upper ſurface of the head and body is of a dull green colour, changing into roſe copper; the wings are of the ſame colour, terminated with blackiſh, lined with light fulvous; the nineteenth and twentieth quills, marked with glaucous on the outſide, and the twenty-ſecond and twenty-third, on the inſide. All the quills and coverts of the tail are of a beryl blue, which is lighter on the inferior coverts; there is a blackiſh bar on the eyes; the throat is yellowiſh, verging on green and fulvous; this laſt tint is more intenſe below; the under ſide of the body and the thighs are of a yellowiſh green changing into fulvous; the bill is black,

black, and the legs brown. This bird is found in the Philippines, and is larger than the common Bee-eater.

Total length eight inches and ten lines; the bill twenty-five lines; the angle of its aperture at a conſiderable diſtance from the eye; the tarſus five lines and a half; the hind toe the ſhorteſt; the alar extent fourteen inches and ten lines; the tail three inches and eight lines, conſiſting of twelve quills nearly equal, and it projects eleven lines beyond the wings, which have only twenty-four quills, the firſt being the ſhorteſt, and the ſecond the longeſt of all [A].

THE

BLUE-HEADED RED BEE-EATER.

Merops Nubicus, Gmel.
The *Blue-headed Bee-eater*, Lath.

A FINE beryl glows on the head and on the throat, where it becomes deeper, and alſo on the rump and on all the coverts of the tail; the neck, and all the reſt of the under ſide of the body, as far as the legs, are crimſon, ſhaded with rufous; the back, the tail, and the wings, are brick colour, which is dunner on the coverts

[A] Specific character of the *Merops Philippinus*: "It is green, below yellowiſh, its rump blue, its tail equal."

of

of the wings; the three or four quills of the wings neareſt the back are of a brown green, with bluiſh reflections; the great quills terminated with bluiſh gray, melted with red; the middle ones are of a blackiſh brown; the bill black, and the legs light cinereous. This is a new ſpecies found in Nubia, where it was delineated by Mr. Bruce; it is not quite ſo large as the European ſpecies.

Total length about ten inches; the bill twenty-one lines; the tarſus ſix lines; the hind toe the ſhorteſt; the tail about four inches, a little forked, and it exceeds the wings about twenty-one lines [A].

The RED and GREEN BEE-EATER of SENEGAL *

Merops Erythropterus, Gmel.
The *Red-winged Bee-eater*, Lath.

THE upper ſurface of the head and body, including the ſuperior coverts of the wings and thoſe of the tail, is dun-green, browner on the head and back, lighter on the rump and the ſuperior coverts of the tail; there is a dark ſpot

[A] Specific character of the *Merops Nubicus*: "It is blue green, below red; its back, its wings, and its forked tail, brick colour."

* We owe this ſpecies to M. Adanſon. The deſcription and figure are as accurate as they could be made from the ſkin of the bird dried and prepared between two leaves of paper.

behind the eye; the quills of the tail and of the wings are red, terminated with black; the throat is yellow; all the under ſurface of the body is dirty white; the bill and legs black.

Total length about ſix inches; the bill one inch; the tarſus three lines and a half; the tail two inches, and it exceeds the wings about one inch [A].

The RED-HEADED BEE-EATER.

Merops Erythrocephalus, Briſſ.
Apiaſter Indicus Erythrocephalus, Briſſ.

IF the name, *cardinal*, can ever be applied to any of the bee-eaters, it certainly belongs to the preſent; for it has a ſort of hood that covers, not only the head, but alſo a part of the neck: it has alſo a black bar on the eyes; the upper ſide of the body is of a fine green; the throat yellow; the under ſide of the body light orange; the inferior coverts of the tail yellowiſh, edged with light green; the tail is green above, cinereous below; the iris red, the bill black, and the legs cinereous.

This bird is found in the Eaſt Indies, and is

[A] Specific character of the *Merops Erythropterus*: "It is olive, below partly whitiſh, its throat bright yellow; its wings and tail red, tipt with black."

nearly

nearly as large as the blue-throated green bee-eater.

Total length ſix inches; the bill ſixteen lines; the tarſus five lines; the hind toe the ſhorteſt; the tail twenty-one lines, conſiſting of twelve equal quills, and exceeding the wings by ten lines [A].

The GREEN BEE-EATER with RUFOUS WINGS and TAIL.

Merops Cayanenſis, Gmel.
The *Cayenne Bee-eater*, Lath.

THE denomination which we have beſtowed on this ſpecies almoſt deſcribes it: we need only to add, that the green is deeper on the upper part of the body and lighter below the throat than on any other part; that the quills of the wings are white at their origin; that their ſhafts as well as thoſe of the tail quills are blackiſh; that the firſt are of a yellowiſh brown, and rather longer than uſual in this genus of birds, and the bill black.

This Bee-eater reſembles much the yellow and white-headed one in the colour of its tail and wings; but the reſt of its plumage is en-

[A] Specific character of the *Merops Erythrocephalus*: "It is green, below yellowiſh, its head and neck red, its throat bright yellow; its wings and tail equal, and cinereous below."

tirely different. It is beſides much ſmaller, and the two middle quills of the tail do not project.

I am aſſured that it is not found in Cayenne; and am the more inclined to think that this is really the caſe, as the genus of the bee-eaters appears to me peculiar to the ancient continent, as I have already ſaid. But M. de la Borde, who is at preſent in Cayenne, will ſoon ſend me the ſolution of this little problem.

The ICTEROCEPHALE, or YELLOW-HEADED BEE-EATER *.

Merops Congener, Linn. and Gmel,
Apiaſter Icterocephalus, Briſſ.
The *other Bee-eater of Aldrovandus*, Will.

THE yellow colour of the head is only interrupted by a black bar, and extends on the throat and all the under ſide of the body; the back is of a fine cheſnut; the reſt of the upper ſide of the body is variegated with yellow and green; the ſmall ſuperior coverts of the wings are blue; the middle ones variegated with yellow and blue, and the great ones entirely yellow; the quills of the wings are black, ter-

* In German it is called *See-Schwalm*, or ſea-ſwallow; which name is, in parts of Italy, given to the king-fiſher: Nor is this ſurpriſing, when we conſider the analogy between that bird and the Bee-eaters.

minated

minated with red; the tail has both colours, black at its baſe and green at its extremity; the bill is black, and the legs yellow.

This bird is rather larger than the ordinary Bee-eater, and its bill is more hooked. It is ſeen very ſeldom near Straſburg, according to Geſner [A].

[A] Specific character of the *Merops Congener*: "It is yellowiſh, its rump greeniſh, its wing-quills tipt with red, its tail-quills yellow at the baſe."

The EUROPEAN GOAT-SUCKER*.

L'Engoulevent, Buff.
Caprimulgus Europæus, Linn. Gmel. &c. &c.
The *Night Raven*, Sibbald.
The *Dorr-hawk, Goat-ſucking Owl, or Night Jarr*, Charleton.
In Shropſhire, the *Fern-Owl*, and in Yorkſhire, the *Churn-Owl*, Ray.
The *Night Hawk*, Edwards.
The *Nocturnal Goat-ſucker*, Penn.

THE Goat-ſucker feeds chiefly on nocturnal inſects †. It begins to wheel only a little before

* Ariſtotle calls it Αιγοθηλας, from Αιξ, a goat, and θηλαζω, to milk: The name which Pliny beſtows is a literal tranſlation of this, *Caprimulgus*. Hence, too, are derived many of its deſignations in the modern languages: In Italian, *Succhia Capre*; in French, *Tette-Chevre*; in German, *Geiſs-Melcher, Milch-Ziegen Suger, Kinder-Melcher*; and in Norwegian, *Gede-Malcher*. As it never appears but in the twilight, this circumſtance has alſo procured it a claſs of names. In Greek, Νυκτικοραξ; in Latin, *Fur Nocturnus*; in Engliſh, *Night-Raven*; in Italian, *Nottola*; in German, *Nacht-Schade, Nacht-Raeblin, Nacht-Vogel*; in Daniſh, *Nat-Raun, Nat-Skade*; in Swediſh, *Nattſkraefwa, Nattſkiarra*. It is alſo called *Cova-Terra* (ground-hatcher) in Italian; *Chaſſe-Crapaud* (hunter-toad) in French; *Nacht-Schwalbe* (night-ſwallow) and *Groſs-Bartigt Schwalbe* (great-bearded ſwallow) in German.

M. de Montbeillard, author of this article, remarks with great juſtice, that the names [1] *Goat-ſucker*, [2] *Flying-toad*, [3] *Great Blackbird*, [4] *Night Crow, and* [5] *Square-tailed Swallow*, ought to be rejected as founded on prejudice and inaccurate obſervation. The firſt of theſe appellations, though ancient and generally admitted,

[1] *Tette-Chevre*; [2] *Crapaud Volant*; [3] *Grand Merle*; [4] *Corbeau de Nuit*; [5] *Hirondelle a Queue Carrée*.

is

† Such as moths, gnats, dorrs or chaffers, beetles, may-bugs, and no doubt night-flies.

ROYAL ASIATIC SOCIETY

N°160

THE GOAT SUCKER.

before ſun-ſet *, and it never takes wing in the middle of the day, except in dark cloudy weather, or when obliged to make its eſcape. Its eyes are ſo delicate as to be dazzled and overpowered by the meridian effulgence, and they perform their office only in a weak light. But we muſt not ſuppoſe that it can diſtinguiſh objects and fly in total darkneſs; the proper time for its excurſions, and indeed for thoſe of all the other nocturnal birds, is the duſk of the evening.

The Goat-ſucker needs not ſhut its bill to ſecure the winged inſects; for a ſort of glue oozes from the palate, which entangles them †.

The Goat-ſuckers are widely ſcattered, yet in no place are they common. They are found in almoſt all the countries of our continent,

is highly improbable, and contradicted by fact; for Schwenckfeld made particular enquiries in a country where numerous flocks of goats are kept in folds, but could never diſcover that they were ſucked by any bird whatever. The other names ought equally to be rejected; it is ſurely not a toad, or a blackbird, or a crow, or an owl. Nor is it even a ſwallow, though much akin to it; for its external figure and its habits are different: its legs are ſhort, its bill ſmall, its throat wide; its food too, and its mode of preying, are not the ſame. M. de Montbeillard adopts the appellation *Engoulevent* (guttler), given in ſome provinces of France, which, though vulgar, conveys a diſtinct idea of the bird in its ſtate of activity; its wings ſpread, its look haggard, its throat extended to its utmoſt width, and wheeling with a hoarſe buzzing noiſe in purſuit of inſects, which it ſeems to *guttle (engouler)* by drawing in its breath.

* Hence Ariſtotle calls it a lazy bird.

† Note communicated by M. Hebert.

from Sweden, and even the more northern tracts, to Greece and Africa, on the one hand; and to India, and, no doubt, ſtill farther, on the other. Sonnerat has ſent a ſpecimen for the Royal Cabinet, from the coaſt of Coromandel; which is certainly either a young one or a female, ſince it, in no reſpect, differs from the common kind, except that it wants thoſe white ſpots on the head and wings which Linnæus regards as the peculiar character of the adult male. The commander de Godeheu informs us, that, in the month of April, the ſouth weſt wind brings theſe birds to Malta*; and the Chevalier Deſmazis, an excellent obſerver, writes to me that they repaſs in as great plenty in autumn. They occur both in flat and in mountainous countries; in Brie, in Bugey, in Sicily †, and in Holland, and almoſt always under a buſh, or in young copſes, or about vineyards; they ſeem to prefer the dry ſtony tracts, the heaths, &c. In the cold countries they arrive later, and retire earlier ‡. They breed on their progreſs, as the

* *See* Savans Etrangers, *t. III.* 91.

† A well-informed traveller informs me, that on the mountains of Sicily theſe birds appear an hour before ſun-ſet, and ſpread in ſearch of food in company with the bee-eaters, and that ſometimes five or ſix fly together.

‡ In England they appear about the end of May, and retire about the middle of Auguſt, according to the Britiſh Zoology. In France M. Hebert ſaw them in the month of November; and a ſportſman aſſured me that he has met with them in winter.

ſituations

ſituations invite *; ſometimes more ſoutherly, at other times more northerly. They are at little trouble in forming their neſt; they are content with any ſmall hole which they happen to find in the earth, or among ſmall ſtones, at the foot of a tree or the bottom of a rock. The female lays two or three eggs, larger than thoſe of the blackbird, and of a darker colour †; and though the affection of parents is in general proportioned to the care beſtowed in providing for their accommodation, the Goat-ſucker is not wanting in tender attentions: on the contrary, I am aſſured that ſhe hatches with the greateſt ſolicitude, and, when ſhe perceives the threats or keen obſervation of an enemy, ſhe changes her ſite, puſhing the eggs dexterouſly, it is ſaid, with her wings, and rolling them into another hole, which, though not better faſhioned, will, ſhe imagines, afford a ſafer concealment.

The ſeaſon when theſe birds appear moſt frequent, is autumn; they fly nearly like the woodcock, and they have the geſtures of the owl. Sometimes they teaſe and diſturb ſportſmen who are on the watch. They have an odd

* The fowlers whom I have conſulted affirm that they never breed in the canton of Burgundy which I inhabit (l'Auxois), and that they appear there only in the time of vintage.

† They are oblong, whitiſh, and ſpotted with brown, ſays M. Salerne; marbled with brown and purple on a white ground, ſays the Count Ginanni, in the Italian Ornithology: the latter adds, that the ſhell is extremely thin.

ſort of habit, which is peculiar to them; they wheel an hundred times in ſucceſſion round ſome large naked tree, with a very irregular and rapid motion; at intervals they dive briſkly, as if to catch their prey, and then riſe as ſuddenly. In ſuch caſes they are undoubtedly engaged in purſuit of the inſects that flutter about the aged trunks; but it is then difficult to get within gun-ſhot of them, for they quickly diſappear, nor can their retreat be diſcovered.

As the Goat-ſucker flies with its bill open, and with conſiderable rapidity, the air continually ſtrikes againſt the ſides of its throat, and occaſions a ſort of buzzing, like the noiſe of a ſpinning-wheel: this whirring infallibly takes place whenever the bird is on the wing, but it varies according to the celerity of the flight. Hence the name of *wheel-bird*, by which it is known in ſome counties of England *. But is this noiſe generally regarded unlucky, as Belon, Klein, and others who have copied them, aſſert? Or is it not rather a miſtake occaſioned by confounding the Goat-ſucker with the white owl? When it ſits, it utters its true cry, which is a plaintive tone repeated three or four times in ſucceſſion; but we are not quite certain whether this is ever heard while the bird is on the wing.

It ſeldom perches, and when it does, it is ſaid

* Our author means Wales, where this bird is called *Aderyn y droell*, which in fact ſignifies *wheel-bird*. T.

not

not to cling acroſs the branch, like moſt other birds, but to ſit lengthwiſe, reſembling the poſture of the cock in *treading (cochant* or *chochant)* the hen; and hence the name *chauche-branche*. It is a ſolitary bird, and is, for the moſt part, ſingle; ſeldom two are found together, and, even then, they are ten or twelve paces from one another.

I have ſaid that the Goat-ſucker flies like the woodcock; their plumage alſo is ſimilar, for all the upper ſide of the neck, of the head, and of the body, and even the under ſide, is gaily variegated with gray and blackiſh, with more or leſs of a ruſty caſt on the neck, the ſcapular feathers, the cheeks, the throat, the belly, the coverts, and the quills of the tail and wings; but the deepeſt ſhades appear on the upper ſurface of the head, of the throat, of the breaſt, on the fore part of the wings, and on their tips: there is ſuch variety that the ideas would be loſt in the *minutiæ* of deſcription; I ſhall therefore only add the characteriſtic properties. The lower jaw is edged with a white ſtripe that extends behind the head; there is a ſpot of the ſame colour on the inſide of the three firſt quills of the wing, and at the ends of the two or three outmoſt quills of the tail; but theſe ſpots are peculiar to the male, according to Linnæus*: the head is large; the eyes very protuberant;

* Willughby obſerved an individual in which theſe ſpots were of

protuberant; the hole of the ears pretty conſiderable; the aperture of the throat ten times wider than that of the bill; the bill ſmall, flat, and ſomewhat hooked; the tongue ſhort, pointed, not divided at the tip; the noſtrils round, and their edge projecting towards the bill; the ſkull tranſparent; the nail of the mid-toe indented, as in the heron; and laſtly, the three fore toes are connected by a membrane as far as the firſt phalanx. It is ſaid that the fleſh of the young Goat-ſuckers is tolerable food, though it leaves a taſte of ants.

Total length ten inches and a half; the bill fourteen lines; the tarſus ſeven lines, feathered almoſt to the ſole; the middle toe nine lines; the hind toe the ſhorteſt of all, and it can be turned forwards, and often has that poſition; the alar extent twenty-one inches and a half; the tail five inches, ſquare, and compoſed of ten quills only; it exceeds the wings fifteen lines [A].

of a pale yellow, tinged with purple, and obſcurely marked; I perceived the ſame thing in two ſubjects; they are probably females, and the one, which is ſmaller than the other, I judge to be younger.

[A] Specific character of the common Goat-ſucker, *Caprimulgus Europæus:* "It is black, variegated with cinereous, brown, ferruginous, and white; its noſtrils obſcurely tubulated." It is moſt frequent in the wooded and mountainous parts of this iſland.

FOREIGN BIRDS,

WHICH ARE RELATED TO THE GOAT-SUCKER.

THERE is only one ſpecies of this genus ſettled in the three diviſions of the old continent; but ten or twelve are found in the new. We might therefore regard America as their original and chief abode, from which the European Goat-ſucker has been expelled by ſome fortuitous event: and as the colony ought ever to be ſubordinate to the mother-ſtate, the order of nature would require that the American ſpecies ſhould precede thoſe of Europe. This arrangement we would have followed; but a more cogent reaſon recommends a different plan. The order of the underſtanding is to proceed from what is well aſcertained to what is more obſcure; we therefore begin with the European birds, which are beſt known to us, and which will tend to illuſtrate thoſe of other climates; leaving to the American philoſophers to begin their natural hiſtory (and would to God that they would compoſe one!) with the productions of America.

The principal attributes of the Goat-ſuckers are theſe: the bill is flat at its baſe, the point being ſlightly hooked, apparently ſmall, but having a gape wider than the head, according to

to ſome authors; large protuberant eyes, like thoſe of nocturnal birds; and long black whiſkers about the bill: the effect of the whole gives it a dull, ſtupid aſpect, and declares it a ſlothful, ignoble race, allied to the martins and the nocturnal birds, and yet ſo nicely characteriſtic, that it is eaſy at the firſt ſight to diſtinguiſh the Goat-ſucker from every other bird: their wings and tail are long, the latter ſeldom forked, and then in a very ſlight degree, and is compoſed of ten quills only: their legs are ſhort, and, for the moſt part, rough; the three fore toes are connected together by a membrane as far as the firſt joint: the hind toe is moveable, and turns forward ſometimes; the nail of the middle toe is commonly indented on the inner edge: the tongue is pointed, and not divided at the end: the noſtrils are tubulated, that is, the projecting brims form on the bill the beginning of a ſmall cylinder: the opening of the ear is wide, and probably its hearing is very acute; and we might even expect this to be the caſe in a bird which has a weak ſight and hardly any ſmell, for, the ear being thus alone capable of intimating what paſſes at a diſtance, the bird will naturally be led to improve that organ. The properties now enumerated are not, however, found in all the ſpecies; ſome there are which have no whiſkers; others that have more than ten quills in the tail; others in which the middle nail is not indented; in ſome it is indented, not

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on the inner edge, but on the outer; in others the noſtrils are not tubulated; in others the hind nail ſeems incapable of being turned forwards. But, what is common to all the ſpecies, their organs of ſight are too delicate to ſupport the light of day; and from this ſingle property are derived the chief circumſtances which diſcriminate the Goat-ſuckers from the ſwallows. Hence they appear not till ſun-ſet in the evening, and retire in the morning a little after ſun-riſe; hence they live ſolitary, diſquieted by gloomy apprehenſions; hence the difference of their cry; hence, too, in my opinion, is owing their not building a neſt, for the weakneſs of their ſight does not permit them to chooſe and arrange, and interweave, the materials. In fact, I know not of any bird that builds during the night, and the Goat-ſucker can, in our latitudes, have only three hours of twilight, which is entirely conſumed in purſuing their humble fugacious prey. Of all the owls the eagle one is ſaid alone to make a neſt; and it the leaſt deſerves the appellation of nocturnal bird, ſince it can fly to conſiderable diſtances in broad daylight. The little owl, which hunts and catches ſmall birds before the ſetting and after the riſing of the ſun, gathers only a few leaves, or ſtalks of herbs, and upon theſe drops the eggs in the holes of rocks or of old walls. Laſtly, the long-eared, the white, the aluco, and the brown, owls, which of all the

nocturnal birds are the leaſt capable of ſupporting the light of the ſun, lay alſo in ſimilar crevices, or in hollow trees, but without any lining, or ſometimes in the neſts of other birds which they find ready formed. And I might aſſert the ſame thing in general of all birds whoſe eye is exceſſively delicate.

Another conſequence reſulting from the too exquiſite mechaniſm of the organ of ſight, is that the Goat-ſuckers, like the other nocturnal birds, have no brilliant colour in their plumage, and are denied even the rich varying gloſs which gliſtens on the ſober attire of the ſwallow: black, and white, and gray, ariſing from the mixture of theſe, and rufous, form the whole garb of the Goat-ſuckers, and theſe are ſo intermingled that the general complexion is duſky and confuſed. They ſhun the light, and light is the ſource of all the fine colours. Linnets, kept in the cage, loſe that charming red which glowed in all its beauty when in free air they imbibed the direct influence of the ſolar beams. It is not in the frozen tracts of Norway, or in Cimmerian ſhades of Lapland, that we find the birds of paradiſe, the cotingas, the flamingos, the humming birds, and the peacocks; thoſe dreary neglected climates never produce the ruby, the ſapphire, or the topaz. And laſtly, thoſe flowers which are forced at great expence in the hot-houſe, acquire but a ſickly hue that cannot compare with the brilliant colours which a ver-

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nal ſun ſheds on the ſpontaneous growth of the painted meadow. The night-flies, it is true, are ſometimes decked with charming tints; but this apparent exception ſeems even to corroborate my idea: for intelligent obſervers * remark that thoſe of them which flutter ſometimes in the day are more gaudily attired than ſuch as appear not until evening. I have myſelf perceived, that in thoſe inſect tribes which iſſue forth at ſun-ſet, the colours reſemble the duſky caſt of the Goat-ſuckers; and, if among the vaſt number there be ſome with dazzling wings, we may ſuppoſe that the tints were already formed in their *larvæ*, which enjoy the enlivening influence of the ſun-beams in an equal degree as thoſe of the diurnal flies. Laſtly, the chryſalids of theſe, which are conſtantly diſcloſed and expoſed to the open air, ſhine for the moſt part with brilliant colours, and ſome of them appear decorated with ſcales of gold and of ſilver, which we ſhould in vain expect to find in the chryſalids of the nocturnal flies, enveloped, as they are, with ſhells, or buried in the earth. I conceive, therefore, that I am warranted to infer, that if a ſeries of obſervations were made upon the plumage of birds, the wings of inſects, and perhaps the hair of quadrupeds †, thoſe ſpecies

* Roeſel. *Inſecten beluſtigung*, t. I. *Vorbericht zu der nachtvoegel erſten claſſe*.

† The plumage of the king-fiſher is much more brilliant between the tropics than in the temperate zone, as we learn from Forſter, in Captain Cook's ſecond Voyage.

would

would be diſcovered to have the richeſt and moſt brilliant colours, which, other circumſtances being alike, were moſt expoſed to the action of the light.

If my conjectures have ſome foundation, the intelligent reader will not be ſurpriſed that different degrees of ſenſibility in the ſame organ may produce conſiderable differences in the natural habits of an animal and in its properties both external and internal.

I.

The CAROLINA GOAT-SUCKER.

Caprimulgus Carolinenſis, Gmel. and Briſſ.
The *Rain Bird*, Brown.
The *Short-winged Goat-ſucker*, Penn.

IF, as in all probability, Europe owes its Goat-ſuckers to America, this undoubtedly is the ſpecies which croſſed the northern ſtraits to found a colony in the ancient continent. It inhabits North America, and its ſize and plumage are ſimilar to thoſe of the European kind: its lower jaw is edged with white, and there is a ſpot of the ſame colour on the margin of the wing. The chief difference conſiſts in this, that the under part of the body is variegated, not with ſmall croſs lines, but with ſmall longitudinal

gitudinal ones, and that the bill is longer. And would not the great change of climate be ſufficient to produce ſuch change in the ſhape and plumage of the bird?

Of the habits of this bird we learn the following particulars from Cateſby: it appears in the evening, but never ſo frequently as in dark cloudy weather, whence it derives the appellation of *Rain-bird*; it purſues with open jaws the inſects on which it feeds, and it flies with a whirring noiſe; laſtly, it lays on the ground, and its eggs are like thoſe of the lapwing. This account correſponds exactly with the hiſtory of the European ſpecies.

Total length eleven inches and a quarter; the bill nineteen lines, beſet with black briſtles; the tarſus eight lines; the middle nail indented on the inſide; the three fore toes connected by a membrane which does not extend beyond the firſt joint; the tail is four inches, and exceeds the wings ſixteen lines.

[A] Specific character of the *Caprimulgus Carolinenſis*: "It is variegated above by tranſverſe angled lines, alternately black and gray; below rufous gray, with blackiſh longitudinal lines; its tail gray, latticed with black." In Carolina it is uſually called *Chuck, chuck Will's Widow*. It ſeems to have the ſame habits with the *Whip-poor Will* of Virginia. Its egg is olive, with blackiſh ſpots.

II.

The WHIP-POOR WILL.

Caprimulgus Virginianus, Briſſ. and Gmel.
The *Long-winged Goat-ſucker*, Penn.
The *Virginian Goat-ſucker*, Lath.

THESE birds arrive in Virginia about the middle of April, particularly in the back parts of the country. There they cry the whole night in a voice ſo ſhrill and ſo loud, and repeated and encreaſed to ſuch a degree by the echoes of the mountains, that one can hardly ſleep in their neighbourhood. They begin a few minutes after ſun-ſet, and continue till dawn. They ſeldom appear near the coaſt, and ſtill ſeldomer during the day. They lay two eggs of a dirty green, variegated with ſmall ſpots, and ſmall blackiſh ſtreaks; the female drops them careleſsly in the middle of a path, without forming any neſt, without gathering moſs or ſtraw, and even without ſcraping the ground; and when ſhe hatches, one may approach very near before ſhe takes to flight.

Many believe the Whip-poor Will to be of ill omen. The ſavages are perſuaded that the ſouls of ſuch of their anceſtors as were maſſacred by the Engliſh have paſſed into the bodies of theſe birds, and allege as a proof, their being never ſeen prior to the ſettlement of the colony. But this

this fact ſhews only that the ſtrangers introduced new ſpecies of cultivation, which invited new tribes of birds.

The upper ſide of the head and of all the body, as far as the ſuperior coverts and quills of the tail incluſively, and even the middle quills of the wings, are of a deep brown, radiated tranſverſely with a lighter brown, and ſprinkled with ſmall ſpots of the ſame colour, with a very irregular mixture of cinereous; the ſuperior coverts of the wings are the ſame, only ſprinkled with a few ſpots of light brown; the great quills of the wings are black, the five firſt marked with a white ſpot near the middle of their length, and the two outer pairs of the tail are marked ſimilarly near the end; the circle of the eye is light brown, verging on cinereous; there is a ſeries of orange ſpots, which begins at the baſe of the bill, paſſes above the eyes, and deſcends upon the ſides of the neck; the throat is covered with a broad reverſed creſcent, white at the top and tinged with orange at the bottom, and whoſe horns point on both ſides to the ears; all the reſt of the lower part is white, tinged with orange, and ſtriped acroſs with blackiſh; the bill is black, and the legs fleſh coloured. This Goat-ſucker is a third ſmaller than the European, and its wings are longer in proportion.

Total length eight inches; the bill nine lines and a half, its baſe beſet with black briſtles;

the tarſus five lines; the nail of the mid-toe is indented on its inner edge; the tail three inches and a quarter, and does not project at all beyond the wings [A].

III.

The GUIRA-QUEREA.

Caprimulgus Jamaicenſis, Gmel.
The *Wood Owl*, Sloane.
The *Mountain Owl*, Brown.
The *Jamaica Goatſucker*, Lath.

THOUGH Briſſon makes no diſtinction between the *guira* deſcribed by Sloane and the one deſcribed by Marcgrave, I conceive that they ought to be diſcriminated and regarded as at leaſt varieties of climate: I ſhall ſtate my reaſons when I treat of Marcgrave's Guira. In that of Sloane the head and neck are variegated with the colour of Spaniſh tobacco, and with

[A] Specific character of the *Caprimulgus Virginianus*: "It is brown, variegated tranſverſely with gray-brown, and here and there with cinereous; below it is ſtriped tranſverſely with reddiſh white; there is a triangular white ſpot on its chin; the ſpace about its eyes and its neck are variegated with orange ſpots." It received the name of *Whip-poor Will* on account of its note: but it really ſounds *Wiperi-wip*, laying the ſtreſs on the laſt ſyllable, and ſliding lightly over the ſecond. It ſits on the buſhes, the fence-rails, or the ſteps of houſes, where the inſects are moſt abundant; it makes a ſpring at them as they paſs, and ſettles again to renew its ſong. In the ſtate of New York it appears in May, and retires in Auguſt.

black;

black; the belly and the ſuperior coverts of the tail and of the wings, variegated with whitiſh; the quills of the tail and of the wings variegated with deep brown and white; the lower jaw almoſt featherleſs; the head, on the contrary, is over-charged with them; the eye-balls protrude from the ſocket about three lines; the pupil is whitiſh, and the iris orange.

This bird is found in Brazil; it inhabits the woods, lives upon inſects, and flies only in the night.

Total length ſixteen inches; the bill two inches, and of a triangular ſhape; its baſe is three inches, ſomewhat hooked, and edged with long whiſkers; the noſtrils are placed in a pretty large groove; the throat is wide; the tarſus three lines; the alar extent thirty inches; the tail eight inches; the tongue ſmall and triangular; the ſtomach whitiſh, ſlightly muſcular, containing half-digeſted beetles; the liver red, divided into two lobes, the one on the right, and the other on the left; the inteſtines are rolled into many circumvolutions.

The Guira of Marcgrave has two very obvious characters which are not found in the deſcription of Sloane, but which could not have eſcaped ſo accurate an obſerver. Theſe are the gold collar and the two middle quills of the tail, which are much longer than the lateral ones: beſides, it is ſmaller, for Marc-

grave reckons it not to exceed the lark; and it is difficult to ſuppoſe that ſuch a bird would meaſure thirty inches acroſs the wings, as Sloane ſtates it. There are alſo ſome differences in the plumage, which conſpire to ſhow that it is a variety from climate. Its head is broad, flat, and large; its eyes large; its bill is ſmall, with a wide aperture; its body is round; its plumage is aſh-brown, variegated with yellow and whitiſh; it has a gold collar tinged with brown; the edges of the bill, near its baſe, are beſet with long black whiſkers; the fore toes are connected by a ſhort membrane; the nail of the mid-toe is indented; the wings have ſix quills; the tail eight, including the two middle ones, which project beyond the reſt.

[A] Specific character of the *Caprimulgus Jamaicenſis*: "It is variegated with longitudinal ferruginous and black ſtreaks; the ſpace about its eyes clothed with a diſk of plumules; its wings brown and ſpotted; its tail cinereous, variegated with black ſpots and dark brown ſtripes."

IV.

The IBIJAU.

Caprimulgus Braſilianus, Gmel.
Caprimulgus Braſilienſis Nævius, Briſſ.
Caprimulgus Americanus Minor, Ray.
The *Braſilian Goat-ſucker*, Lath.

THIS Braſilian bird has all the characters of the Goat-ſuckers: its head is broad and flat, its eyes large, its bill ſmall, its throad wide; its legs ſhort, the mid-toe indented on its inner edge, &c.; but what is peculiar to it, is the habit of expanding its tail from time to time. Its head and all the upper ſide of its body are blackiſh, ſprinkled with ſmall ſpots, mouſly white, ſome of them tinged with yellow: the under ſide of its body white, variegated with black, as in the ſparrow-hawk, and its legs are white.

It is nearly as large as the ſwallow; its tongue very ſmall; its noſtrils open; the tarſus ſix lines; the tail two inches, and exceeds not the wings.

VARIETIES of the IBIJAU.

1. THE LITTLE SPOTTED GOAT-SUCKER OF CAYENNE *. It bears a ſtrong reſemblance

* *Caprimulgus Cayanenſis.* Gmel.
The *White-necked Goat-ſucker*, Lath.

to the Ibijau in its ſize, in the length of its wings, and in the proportions of its other dimenſions, and in the blackiſh caſt of its plumage ſpotted with a lighter colour; theſe ſpots are rufous or gray, except on the neck, whoſe fore part has a ſort of white collar, not mentioned by Marcgrave in his deſcription of the Ibijau, and which chiefly diſtinguiſhes this variety; the under ſide of the body is alſo darker.

Total length eight inches; the bill fifteen lines, black, beſet with ſmall briſtles; the tail two inches and a half.

II. THE GREAT IBIJAU *. The difference of bulk is very conſiderable, it being as large as an owl, and its bill ſo wide as to admit the hand; in other reſpects the colour and proportions are the ſame as in the little Ibijau. Marcgrave does not inform us whether it alſo ſpreads its tail; nor does he mention that there is a horn on the fore part of the head and behind it a ſmall tuft, as his figure ſeems to repreſent. But it is well known that Marcgrave's figures are inaccurate, and that more reliance ought to be had on the text.

With this ſpecies we ſhould alſo range the great Goat-ſucker of Cayenne, both on account of its bulk, and of its plumage, which is ſpotted with black, with fulvous and with white,

* *Caprimulgus Grandis*, Gmel.
Caprimulgus Braſilienſis Major Nævius, Briſſ.
The *Grand Goat-ſucker*, Lath.

principally

principally on the back, the wings, and the tail; the upper ſide of the head and of the neck, and the under ſide of the body, are ſtriped tranſverſely with different ſhades of the ſame colours; but the general caſt of the breaſt is browner, and forms a ſort of cincture. M. de Sonini ſaw one whoſe plumage was darker, and which had been found in the hollow of an exceeding large tree; this is its ordinary abode, but it prefers thoſe trees which grow near water. It is at once the largeſt of the Goat-ſuckers known in Cayenne, and the moſt ſolitary.

Total length twenty-one inches; the bill three inches long, and as broad, the upper mandible has a deep ſcalloping on both ſides near the point, the lower mandible fits into theſe ſcallops, and its edges are reflected outwards; the noſtrils are flat and ſhaded by the feathers of the baſe of the bill, which grow forwards; the tarſus is eleven lines, feathered almoſt to the toes; the nails are hooked, hollowed below by a furrow, which is parted into two by a longitudinal ridge; the mid-toe is not indented, but is very large, and appears even more ſo on account of a membranous ledge on each ſide; the tail nine inches, a little tapered; the wings project ſome lines beyond it.

The SPECTACLE GOAT-SUCKER, or the HALEUR.

Caprimulgus Americanus, Linn. Gmel. and Bor.
Caprimulgus Jamaicenſis, Briſſ. and Ray.
Hirundo Jamaicenſis, Klein.
The *Screech-Owl*, Brown.
The *Small Wood-Owl*, Sloane.
The *American Goat-ſucker*, Lath.

THE protuberant noſtrils of this bird have ſome reſemblance to a pair of ſpectacles, and hence its name of *Spectacle Goat-ſucker (Enjoulevent à Lunettes)*: that of *Haleur* evidently alludes to its cry.

This Goat-ſucker lives upon inſects, like all the others; and, in its internal conformation, it reſembles the guira of Sloane, with which it conſorts: it inhabits both Jamaica and Guiana; its plumage is variegated with gray, with black, and with the colour of withered leaves; its bill is black; its legs brown; and there is abundance of feathers in the head and under the throat.

The length, according to Sloane, is ſeven inches; the bill is ſmall but wide; the upper mandible ſomewhat hooked, three lines long (reckoning, no doubt, from the root of the feathers on the front) edged with black whiſkers;

ers; the tarſus, together with the foot, eighteen lines; the alar extent ten inches [A].

VI.

The VARIEGATED GOAT-SUCKER of CAYENNE.

Caprimulgus Cayannenſis, Gmel.
The *White-necked Goat-ſucker*, Lath.

ALL the birds of this genus are variegated, but this is more ſo than the reſt; it is the moſt common in Cayenne; it frequents the plantations, the roads, and other cleared parts. When on the ground it utters a feeble cry, attended conſtantly with a ſhivering of the wings, and reſembling the croaking of the toad: It has alſo another cry like the barking of a dog. It is not ſhy, and when ſcared, it never flies to any great diſtance.

The head is delicately ſtriped with black on a gray ground, with ſome ſhades of rufous; the upper ſide of the neck is ſtriped with the ſame colours, but not ſo nicely: on each ſide of the head are five parallel bars, ſtriped with black on a rufous ground; the throat is white, and

[A] Specific character of the *Caprimulgus Americanus*: "Its noſtrils are tubulated and projecting."

alſo

alſo the fore part of the neck; the back is ſtriped acroſs with blackiſh on a rufous ground; the breaſt and belly are ſtriped alſo, but leſs regularly, and ſprinkled with a few white ſpots; the lower belly and the thighs are whitiſh, ſpotted with black; the ſmall and middle coverts of the wings are variegated with rufous and black, ſo that rufous predominates on the ſmall ones, and black on the middle ones; the great ones are terminated with white, which forms a croſs bar of that colour; the quills of the wings are black; the five firſt marked with white two thirds or three fourths of their length; the ſuperior coverts and the two middle quills of the tail are ſtriped acroſs with blackiſh on a gray ground, clouded with black; the lateral quills edged with white; and this edging is broader as the quill is more exterior; the iris is yellow, the bill black, and the legs yellowiſh-brown.

Total length about ſeven inches and a half; the bill ten lines, beſet with briſtles; the tarſus five lines; the tail three inches and a half, and projecting about an inch beyond the wings.

VII.

THE

SHARP-TAILED GOAT-SUCKER.

L'Engoule-vent Acutipenne de la Guyana, Buff.
Caprimulgus Acutus, Gmel.

THIS bird differs from the preceding not only in its dimenſions, but in the ſhape of its tail feathers, which are pointed. It is diſtinguiſhed alſo by the colours of its plumage. The upper ſurface of the head and neck is ſtriped tranſverſely, but not delicately, with tawny brown and black; the ſides of the head are variegated with the ſame colours, only rufous predominates; the back is ſtriped with black on a gray ground, and the under ſurface of the body on a rufous ground; the wings are nearly as in the preceding ſpecies; the quills of the tail are ſtriped acroſs with brown on a pale cloudy rufous, terminated with black, but a little white precedes this black tip; the bill and legs are black.

It is ſaid that theſe birds ſometimes aſſociate with the bats; which is not very extraordinary, ſince they leave their retreats at the ſame hours, and purſue the ſame prey. Probably theſe are the ſame with the ſmall ſpecies mentioned by M. de la Borde, which neſtle like the wood pigeons,

pigeons, the turtles, &c. in October and November, that is, two or three months before the rainy ſeaſon, which begins about the fifteenth of December, and during which moſt of the birds breed.

Total length about ſeven inches and a half; the tail three inches, conſiſting of ten equal quills, and projecting a few lines beyond the wings.

VIII.

The GRAY GOAT-SUCKER.

Caprimulgus Griſeus, Gmel.

I saw in Manduit's cabinet a Goat-ſucker from Cayenne much larger than the preceding; it had more gray in its plumage, and its proportions were ſomewhat different, and the quills of the tail were not pointed. The quills of the wings were not ſo black as in the preceding ſpecies, and were ſtriped acroſs with gray; thoſe of the tail were ſtriped with brown on a gray ground variegated with brown, without any white ſpots; the bill was brown above, and yellowiſh below.

Total length thirteen inches; the bill twenty lines; the tail five lines and a quarter; and projecting a little beyond the wings.

IX.

The MONTVOYAU of GUIANA.

Caprimulgus Guianenſis, Gmel.
The *Guiana Goat-ſucker*, Lath.

MONTVOYAU is the cry of this bird, which pronounces diſtinctly the three ſyllables, and repeats them very often in the evening among the buſhes. Like the European Goat-ſucker, it has a white ſpot on each of the five firſt quills of the wing, of which the ground is black, and another white ſpot or bar which riſes from the corner of the bill, and ſtretches forwards, but extends alſo under the neck, in which circumſtance it differs; and beſides it has in general more of the fulvous and ruſty colours in its plumage, which is almoſt wholly variegated with theſe two colours; yet theſe aſſume different ſhades and modifications in different parts; croſs ſtripes on the lower region of the body, and the middle quills of the wings; longitudinal ſtripes on the upper ſide of the head and neck; oblique ſtripes on the top of the back; and laſtly, there are irregular ſpots on the reſt of the upper ſide of the body, where the fulvous aſſumes a gray caſt.

Total length nine inches; the bill nine lines and a half, beſet with briſtles; the tarſus naked; middle nail indented on its outſide, the tail three inches, exceeding the wings one inch.

X.

The RUFOUS GOAT-SUCKER of CAYENNE.

Caprimulgus Rufus, Gmel.

RUFOUS clouded with blackiſh forms almoſt all the ground of the plumage; and black variouſly intenſe conſtitutes its whole ornament: it is diſpoſed in longitudinal, oblique, irregular bars, on the head and the upper ſide of the body; it makes a fine irregular tranſverſe ſtriping on the throat, a little broader on the fore part of the neck, the under ſide of the body, and of the legs; then a little broader on the ſuperior coverts and on the inner edge of the wing near its extremity; laſtly, broadeſt of all on the quills of the tail. Some ſpots are ſcattered here and there on the body, both above and below. In general, blackiſh predominates on the top of the belly; rufous on the lower belly, and ſtill more on the inferior coverts of the tail; the middle part of the great quills of the wings preſents ſmall ſquares alternately rufous and black, checkered almoſt as regularly as ſpots on a cheſs board; the iris is yellow, the bill light brown, and the legs fleſh coloured.

Total length ten inches and a half; the bill twenty-one lines; the tail four inches and two thirds, exceeding the wings ſix lines.

I have ſeen at M. Maudùits' a Goatſucker, from Louiſiana, of the ſame ſize with this, and very ſimilar, only the croſs ſtripes had more intervening ſpaces, and the rufous was lighter, which formed a kind of collar; the reſt of the under ſide of the body was ſtriped as in the preceding; the bill black at the point, and yellowiſh at the baſe.

Total length eleven inches; the bill two inches, edged with eight or ten ſtiff briſtles, bending forward; the tail five inches, and projecting a very little beyond the wings.

The SWALLOWS*

WE have ſeen that the goat-ſuckers may be reckoned night-Swallows, and that the only eſſential difference between them and the real Swallows conſiſts in the exceſſive delicacy of their eyes, and its influence on their ſtructure and habits. In both tribes of birds the bill is ſmall, and the throat wide; the legs ſhort, and the wings long; the head flat, and the neck ſcarce viſible; and both live upon inſects, which they catch in the air. But, 1. The Swallows have no briſtles about the bill; the nail of the mid-toe is not indented; their tail contains two more quills, and, in moſt of the ſpecies, it is forked; and they are in general ſmaller than the goat-ſuckers.

2. Though the colours are nearly the ſame

* In Hebrew, *Agur, Sus, Chauraf, Thartaf, Chatas, Chataf:* in Greek, the Swallow is denominated Χελιδων, derived perhaps from χειλος, *the cheek*, and δινεω, *to whirl*; alluding to their rapid flutter, and the continual motion of their bill. It had the epithets κωλιας, *chatterer*; ολολυγων, *moaner*; αυκυπτερη, *ſwift-winged*. The Latin, *Hirundo*, was firſt written *helundo*, and evidently borrowed from χελιδων. In Italian it is termed *Rondina, Rondinella, Ceſila:* In Spaniſh, *Golondrina, Andorinha:* In German, *Schwalbe:* In Swiſs, *Schwalm:* In Flemiſh, *Swalwe:* In Swediſh, *Swala:* In Poliſh, *Jaſkotka*. The Engliſh word *Swallow* perhaps comes from the verb, but more probably from the German *Schwalbe*, which is ſoftened in the parent Saxon into *Swale*. The French *Hirondelle* is evidently formed from the Latin *Hirundo*.

in both, conſiſting of black, of brown, of gray, of white, and of rufous, they are diſpoſed in large ſpots on the Swallows, and better contraſted; and the plumage has a bright varying gloſs.

3. The goat-ſuckers entangle the night-flies with the viſcous ſaliva that trickles within their mouth; but the Swallows, and alſo the martins, ſnap the winged inſects, and the ſudden cloſing of their bill occaſions a ſort of cracking noiſe.

4. The Swallows are more ſocial than the goat-ſuckers; they often gather in numerous flocks; and in certain circumſtances they lend mutual aſſiſtance, as in building their neſts.

5. In this conſtruction they generally diſplay much attention and art; and if a few ſpecies lay in the holes of walls, or in ſuch as they form in the ground, they chooſe excavations of a ſufficient depth to afford protection for their young, and they provide whatever will contribute to convenience, warmth, and eaſe.

6. The manner in which the Swallows fly differs in two principal points from that of the goat-ſuckers. It is not attended with that whirring noiſe which I have before mentioned, becauſe the bill is not kept open: and though their wings ſeem not better calculated for motion, they wheel with much greater boldneſs, celerity, and continuance; becauſe the diſtinctneſs of their viſion permits them to exert all

their force. They live habitually in the air, and perform their various functions in that element. The flight of the ſwallow is perhaps leſs rapid than that of the falcon, but it is eaſier and more unreſtrained; the one darts forward with vigour, the other glides ſmoothly through the air: ſhe ſhoots in every direction to ſurvey, as it were, her aerial domain; and her ſhrill ſlender notes expreſs the cheerfulneſs of her condition: ſometimes ſhe purſues the fluttering inſects, and nimbly follows their devious winding tracks, or leaves one to hunt another, and ſnaps a third as it paſſes: ſometimes ſhe eſcapes the impetuoſity of the bird of prey by the quick flexures of her courſe. She can always command her ſwifteſt motion, and in an inſtant change its direction; and ſhe deſcribes lines ſo mutable, ſo varied, ſo interwoven, and ſo confuſed, that they can hardly be pictured by words.

7. The Swallows ſeem not to be peculiar to either continent, and as many ſpecies nearly are diffuſed through the old as through the new. They are found in Norway and in Japan *, on the coaſts of Egypt and thoſe of Guinea, and at the Cape of Good Hope †. What country is inacceſſible to their eaſy ſwift courſe? But ſeldom they remain the whole year in the ſame climate; thoſe of Europe continue only during

* Kæmpfer. † Villaut and Kolben.

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the ſummer months, appearing at the vernal equinox, and retiring at the autumnal. Ariſtotle, who wrote in Greece, and Pliny, who copied him in Italy, aſſert that the Swallows paſs into the milder climates to winter, when theſe are not very diſtant; but that, in other caſes, they ſeek a lodgment in the warm ſheltered dales. Ariſtotle adds that many of them have been found thus concealed with not a ſingle feather on their body *. This opinion, countenanced by the authority of great names, and ſupported by facts, became popular, inſomuch that even poets drew their compariſons from it †. Several modern obſervations ſeemed to confirm it ‡; and, with ſome modifications, it might have been brought to the truth. But a biſhop of Upſal, *Olaus Magnus*, and a Jeſuit, named *Kircher*, amplifying the aſſertion of Ariſtotle, already too general, have aſſerted that, in the northern countries, the fiſhermen often find in their nets heaps of Swallows grouped together and cloſe entangled with each other, bill to bill, feet to feet,

* Ariſt. *Hiſt. Anim.* Lib. VIII. 12 and 16. Plin. *Hiſt. Nat.* Lib. X. 24.

† *Vel qualis gelidis, pluma labente, pruinis*
Arboris immoritur trunco brumalis hirundo.
CLAUD.

‡ Albertus, Auguſtinus Nyphus, Gaſpar Heldelin, and ſome others, aver that they frequently found during winter, in Germany, Swallows torpid in hollow trees, and even in their neſts, which is not abſolutely impoſſible.

and wings to wings; that when theſe birds are carried to ſtoves they quickly recover from their torpor, but die ſoon after; and that none ſurvive the renovation of their vital powers, except ſuch as gently feel the growing warmth of the ſeaſon, and, riſing ſlowly from the bottom of the lakes, are, with all the ſucceſſive gradations, reſtored by nature to their true element. This aſſertion has been repeated, embelliſhed, and loaded with more extraordinary circumſtances; and, as if it were not ſufficiently marvellous, ſome have added that, about the beginning of autumn, theſe birds plunge in crowds into the wells and ciſterns *. I muſt confeſs, that many authors and other perſons, reſpectable by their character or rank, have believed in this phænomenon. Linnæus himſelf has given a ſort of ſanction to it by his authority; only he reſtricts it to the chimney Swallow and the common martin, but does not impute it to the ſand martin, which was more natural. On the other hand, the number of naturaliſts who reject the opinion is fully as great †; and their proofs ſeem to be much more cogent. I know that it is ſometimes imprudent to judge of a particular fact by what are called the general laws of nature; becauſe theſe, being found-

* *P. Ant. Tolentinus.*

† Marſigli, Ray, Willughby, Cateſby, Collinſon, Wager, Edwards, Reaumur, Adanſon, Friſch, Teſdorf, Lottinger, Valliſnieri, the authors of the Italian Ornithology, &c.

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ed on obſervation, are true only ſo far as they comprehend all the facts; but the ſubmerſion of Swallows appears by no means aſcertained; and I ſhall here ſtate my reaſons.

Moſt of thoſe who atteſt this marvellous tale*, particularly Hevelius and Schœffer, who were appointed by the Royal Society of London to examine and weigh the proofs, adduce nothing but vague reports †, and a ſuſpicious tradition; to which the work of Olaus Magnus might have given origin. Even thoſe who aſſert their having ſeen the phænomenon, as Etmuller, Wallerius, and ſome others ‡, only repeat the words of the biſhop of Upſal, without joining any circumſtantial remarks which give probability to a relation.

If it were true that all the Swallows which

Schœffer, Hevelius, Aldrovandus, Neander and Bartius, Gerard, Schwenckfeld, Rzaczynſki, Derham, Klein, Regnard, Ellis, Linnæus, &c. We might enlarge the liſt, but the number of partiſans in reality weakens the opinion which they maintain; ſince among ſo many obſervers not one can produce a ſingle circumſtantial and authentic fact.

† *See* Philoſophical Tranſactions, No. 10, and judge if the Royal Society ever verified the fact, as aſſerted by the journaliſts of Trevoux, the Abbe Pluche, and ſome others.

‡ Chambers cites Dr. Colas, who ſays that he ſaw ſixteen ſwallows taken out of the lake Sameroth, thirty taken out of the Royal Pool at Roſineilen, and two others at Schledeiten, the moment they came out of the water: he adds that they were very wet and feeble, and that he had obſerved that theſe birds are uſually very weak on their firſt appearance. But this is contrary to daily obſervation; beſides Dr. Colas mentions neither the ſpecies, nor the date, nor the circumſtances, &c.

inhabit a country plunge into the water or mud annually in October, and riſe from their ſub-aqueous bed in the following April, there muſt have been frequent opportunities of obſerving them, either in the inſtant of their immerſion, or, what is much more curious, in the moment of their emerſion, or during their long repoſe at the bottom of the pool. Theſe would have been notorious facts, confirmed by the united teſtimony of perſons of all conditions, by fiſhermen, hunters, farmers, travellers, ſhepherds, mariners, &c. No one doubts that the marmots, the dormice, and the hedge-hogs, ſleep benumbed during the winter in their holes; no one doubts that the bats paſs that cold ſeaſon in the ſame torpid ſtate, clinging to the roofs of ſubterraneous caves, and muffled in their wings. But it is hard to believe that Swallows can live ſix months without breathing, and all that time under water. Their emerſion has never been obſerved *, though, if it were true, it muſt happen frequently in the ſeaſon when the pools are fiſhed. The account is ſuſpected even on the ſhores of the Baltic: Dr. Halmann, a Ruſſian, and M. Brown, a Norwegian, who were at Florence, aſſured the authors of the *Italian Ornithology* that, in their northern climates, the Swallows appeared and retired at the ſame times

* I know that Heerkens, in his poem entitled *Hirundo*, has deſcribed in Latin verſes this emerſion; but at preſent we have nothing to do with poetical deſcriptions.

as in Italy, and that their pretended ſubmerſion under water was a fable current only among the vulgar.

M. Teſdorf of Lubec, a man who joins much philoſophy to extenſive and various information, has written to the Count de Buffon, that, notwithſtanding forty years attention to the ſubject, he could never ſee a ſingle Swallow drawn out of the water.

M. Klein, who has been at ſuch pains in ſupporting the opinion of immerſion and emerſion of Swallows, confeſſes that he was never fortunate enough to catch them in the fact *.

M. Hermann, a learned profeſſor of natural hiſtory at Straſburgh, and who ſeems even to lean to Klein's idea, owns to me in his letters, that he was never gratified with a ſight of the ſuppoſed phænomenon.

Two other obſervers of the moſt undoubted authority, M. Hebert and the Viſcount Querhoent, aſſure me that they knew the ſubmerſion of Swallows only from hearſay, and could never verify it by their own obſervations.

Dr. Lottinger, who has much ſtudied the economy of birds, and who does not always coincide with me in opinion, regards this ſubmerſion as an incredible paradox.

In Germany, a reward of an equal weight of

* In Nivernois, Morvand, Lorraine, and many other provinces where pools abound, the people have no idea of the immerſion of the Swallows.

ſilver

ſilver was offered publicly to whoever ſhould produce Swallows found under water; yet no perſon ever claimed the prize *.

Many perſons of learning or rank †, who believed in this ſtrange phænomenon, and wiſhed to perſuade others, offered to exhibit cluſters of Swallows fiſhed up in winter, but never fulfilled their promiſe.

Klein produces certificates; but almoſt all of them are ſigned by a ſingle perſon, and refer only to one occurrence, which happened long prior, and either founded upon mere report, or ſeen when the obſerver was a child. They ſeem to be ſervilely copied from the text of Olaus, and want thoſe little minute incidents which mark an original relation; and this uncertainty alone is ſufficient to overturn the aſſertion ‡.

But it is not enough that we invalidate the proofs on which this paradox reſts, we muſt ſhew that they are inconſiſtent with the known laws of animal economy. When any quadruped or bird has once breathed, and the *foramen ovale*, which in the *fœtus* formed the communication between the two ventricles of the heart, is ſhut, reſpiration becomes ever after neceſſary

* Friſch.

† A Grand Marſhal of Poland and an Ambaſſador of Sardinia had promiſed them to M. de Reaumur; the Governor of R. and many others had promiſed them to M. de Buffon.

‡ The periodical publications have alſo recorded obſervations favourable to the hypotheſis of Klein; but the leaſt examination of them will convince us that they are incomplete and indeciſive.

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to the continuance of life. Swallows kept under water, with all the due precautions, die in a few minutes*, and even when ſhut up in an ice-houſe †, do not ſurvive many days; how then could they live ſix months at the bottom of a lake? I know that in ſome animals this may be poſſible; but ſhall we, as Klein has done, compare the Swallows to inſects ‡, to frogs, or to fiſhes, which have their internal ſtructure ſo different? Shall we infer that, if marmots, dormice, hedge-hogs, and bats, continue, as we have juſt ſaid, torpid in winter, the Swallows will alſo in a ſimilar ſtate outlive the rigours of the ſeaſons? But not to mention, that theſe quadrupeds can be ſupported by reabſorption of the ſuperabundant fat with which they are provided in the autumn, and which is wanting to the Swallows; not to mention the low temperature of their bodies, as obſerved by the Count de Buffon, in which reſpect they differ from the Swallow §; not to mention, that they

* *See* the Italian Ornithology, *t. III. p. 6.* The authors aſſert poſitively that all the Swallows which they plunged into water, even at the time of their diſappearance, expired in a few minutes; and though theſe recent drowned Swallows might have been recovered, yet if they had lain ſome days, and ſtill more, ſeveral weeks or months, they would have been totally paſt recovery.

† This experiment was made by the Count de Buffon.

‡ Caterpillars die in water after a certain time, as M. de Reaumur proved; and the ſame is probably the caſe with other inſects that have *tracheæ*.

§ Dr. Martin found the heat of birds, and particularly that of

they often periſh in their holes when the rigours of the ſeaſon are of uncommon duration, and that the hedge-hogs are alſo torpid in Senegal, where the winter is hotter than our fineſt ſummers, but where the Swallows are perpetually active*: I ſhall only obſerve, that theſe quadrupeds are in air, and not under water; that they can ſtill breathe, though numbed; and that the circulation of the blood and of other fluids, though more ſluggiſh than uſual, goes on in the ſame manner. Nay, according to the obſervations of Valliſnieri, theſe functions are performed in frogs, which ſleep through the winter in the bottom of marſhes. But circulation is effected by a different mechaniſm in amphibious animals from that in quadrupeds or in birds†. In theſe, reſpiration is eſſential to life. There

of Swallows, to exceed two or three degrees that of the warmeſt quadrupeds. *See his Eſſay on Thermometers.*

* Conſult *Adanſon's Voyage to Senegal.*

† The circulation of the blood in quadrupeds and in birds is nothing but the perpetual motion of that fluid, determined by the ſyſtole (or contraction) of the heart, to paſs from its right ventricle, through the pulmonary artery, into the left ventricle; to paſs from this ventricle, which has alſo its ſyſtole, through the trunk of the *aorta* and its branches, into all the reſt of the body; to return by the branches of their veins into their common trunk, which is the *vena cava*; and finally into the right auricle of the heart, where it again begins to repeat its round. From this mechaniſm it follows that, in quadrupeds and in birds, reſpiration is neceſſary to open for the blood the paſſage through the breaſt, and conſequently is neceſſary to circulation; whereas in the amphibious animals, as the heart has only a ſingle ventricle, or ſeveral ventricles which, communicating

There is a well-known experiment of Dr. Hook's: having ſtrangled a dog, and having made inciſions in the ribs, in the diaphragm, in the pericardium, and in the top of the wind-pipe, he renewed or ſtopped, as often as he pleaſed, the vital action, by blowing into the lungs or cloſing the paſſage. It is impoſſible, therefore, that Swallows or ſtorks, for they alſo have been ranked among the diver-birds *, could live ſix months under water without any communication with the external air; the more ſo, as this ſeems to be neceſſary even for fiſhes and frogs, which is evinced by ſeveral experiments that I have lately made.

Of ten frogs, which were found beneath the ice on the ſecond of February, I put three of the livelieſt into three glaſs veſſels full of water, where they could move freely, but not riſe to the ſurface, though a part of this even was

communicating with each other, perform the function of one, the lungs afford not a paſſage to the whole maſs of blood, but only receive a quantity ſufficient for their nouriſhment; and by conſequence their motion, which is that of reſpiration, is much leſs neceſſary to that of circulation. This inference is confirmed by experiment: a tortoiſe, which had the trunk of its pulmonary artery tied, lived, and its blood continued to circulate for the ſpace of four days, though its lungs were open and cut in ſeveral places. *See* Animaux de Perrault, *part II. p.* 196.

* *See* Schwenckfeld, *Aviarium Sileſiæ, p.* 181. Klein, Ordo *Avium, pp.* 217, 226, 288, & 229. St. Cyprian, *contra Bodinum, p.* 1459. Luther, *Comment. ad Geneſ. cap. I.* But Haſſelquiſt, when in the neighbourhood of Smyrna, ſaw about the beginning of March the ſtorks paſs in their way to the north.

immediately

immediately in contact with the external air. Three others were thrown, at the ſame time, each into an earthen pot half-filled with water, and permitted to breathe at the ſurface; and the four remaining ones were placed together at the bottom of a large open empty veſſel.

I had previouſly noticed their reſpiration, both in air and in water, and found it to be very irregular *. When ſuffered to ſwim about at will, they often roſe to the ſurface, and even protruded their noſtrils: I could then perceive a vibratory motion in the throat correſponding nearly to the alternate dilatation and contraction of the noſtrils. As ſoon as they plunged again into the water, both motions ſuddenly ceaſed. If haſtily forced to deſcend, they ſhewed a manifeſt uneaſineſs, and allowed a number of air-bubbles to eſcape. The veſſel was filled with water to the brim, and covered by a weight of twelve ounces; yet the frog, to get air, puſhed off the cover. The three frogs which were kept under water conſtantly ſtruggled hard to gain the ſurface, and they all died, the one in twenty-four hours, and the others in the courſe of two days †. But of the ſeven others, five eſcaped,

* "Frogs, tortoiſes, and ſalamanders, ſometimes ſwell themſelves ſuddenly, and remain in that ſtate . . . a full quarter of an hour: ſometimes they ſuddenly make an entire expiration, and remain very long in that ſtate." *Animaux de Perrault, part II. p. 272.*

† It is proper to remark that frogs are very vivacious, that they can

eſcaped, and the remaining two, which had been allowed both air and water, are male and female, and, at preſent (22d April, 1779) more lively than ever; ſince the ſixth the female has layed about one thouſand three hundred eggs.

The ſame experiments were made with equal attention on nine ſmall fiſhes of ſeven different ſpecies, viz. the gudgeon *, the bleak †, the barbel ‡, the minow §, the bull-head ||, the dog-fiſh ⊹, and another known by the name of *bouziere* in Burgundy. Eight of the firſt ſix ſpecies having been held under water died in leſs than twenty-four hours **; but thoſe which were kept in ſimilar bottles, and permitted to riſe to the ſurface, lived, and retained their uſual vivacity. The *bouziere* indeed lived longer under water than the reſt, and I found that the

can endure a month's abſtinence, and that they ſhow motion and life ſeveral hours after their heart and bowels are detached from their body. *See* Collection Academique. *Hiſt. Nat. t. I. p.* 320.

* *Cyprinus-Gobio*, Linn.
† *Cyprinus Alburnus.*
‡ *Cyprinus Barbus.*
§ *Cyprinus-Phoxinus.*
|| *Cottus Gobio.*
⊹ *Squalus-Canicula.*

** The bleak died in three hours, the two little barbels in ſix hours and a half, one of the gudgeons in ſeven hours, the other in twelve hours, the minow in ſeven hours and a half, the bull-head in fifteen hours, the dog-fiſh in twenty-three hours, and the *bouziere* in near four days. The ſame fiſhes, kept in air, die in this order: the bleaks in thirty-five or forty-four minutes, the *bouziere* in forty-four, the dog-fiſh in fifty or fifty-two, the barbels in fifty or ſixty, one of the minows in two hours and forty-eight minutes, the other in three hours, one of the gudgeons in an hour and forty-nine minutes, the other in ſix hours and twenty-two minutes. The biggeſt of theſe fiſh did not meaſure twenty lines from the eye to the tail.

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one which was not confined appeared ſeldom at the ſurface; and it is probable that theſe fiſhes reſide more conſtantly than the others at the bottom of brooks, which implies ſome difference of ſtructure *. However, it often tried to reach the ſurface, and, on the ſecond day, it ſeemed uneaſy and oppreſſed, its reſpiration grew laborious, and its ſcales pale and whitiſh †.

But it will appear more extraordinary, that of two carps ‡ equal in ſize, the one, which was kept conſtantly under water, lived a third ſhorter time than the other, which was not put into water, though in its flouncing it had fallen from a chimney-piece four feet to the ground §. And in two other experiments compared together and made on larger barbels than employed before, thoſe kept in the air lived longer, and

* This fiſh was ſmaller than a little bleak; it had ſeven fins, the ſcales on the upper ſide of the body yellowiſh, edged with brown, and thoſe of the under ſide reſembling mother of pearl.

† Such is the general appearance of fiſhes dying under water; but it is greatly inferior to thoſe ſingular changes of colour exhibited at the death of a fiſh, known formerly to the Romans by the name of *Mullus* (mullet), whoſe hues afforded entertainment to the gluttons of thoſe days *(proceres gulæ)*. *See* Pliny, *Hiſt. Nat. Lib IX.* 17, and Seneca, *Quæſt. Nat. Lib. III.* 18. [Nothing can be more beautiful than the ſucceſſive changing tints that appear on the ſurface of the expiring dolphin, and the gradual progreſs of the final livid hue, from the extremities to the head; a ſpectacle which I have frequently witneſſed. T.]

‡ *Cyprinus-Carpio*, Linn.

§ The firſt lived eighteen hours under water, the ſecond twenty-ſeven hours in the air.

ſome

ſome twice as long as thoſe confined under water *.

It may be objected, that, as frogs are found beneath ice, they may ſubſiſt a conſiderable time without air. But it is well known that, when water freezes, the air uſually contained in it is diſengaged, and gathers below the ſuperficial cruſt; ſo that the frogs may ſtill inhale the vital breath.

If, therefore, the foregoing experiments evince that frogs and fiſh cannot exiſt without air, and if the experience of all ages and nations proves that, at certain intervals, at leaſt, every amphi-

* Of the two barbels that were left to die out of the water in a room without a fire, the thermometer being ſeven degrees above nought (about 48° of Farenheit), the one was a foot long, weighed thirty-three ounces, and lived eight hours; the other meaſured a little more than nine inches and a half, weighed ſeventeen ounces, and lived four hours and ſeventeen minutes: whereas the two fiſhes of the ſame ſpecies lived under water, the one only three hours and forty-ſix minutes, and the other but three hours and a quarter. But ſuch was not the caſe with the dog-fiſh, for the largeſt, which was five inches and nine lines long, lived only three hours in the air; and the other, which was four inches nine lines, lived three hours and three quarters under water. During the courſe of theſe obſervations, I thought that I could perceive the agony of the fiſh marked by the ceſſation of the regular motion of the gills and by a periodical convulſion in theſe organs, which returned twice or thrice in a quarter of an hour: the large barbel had thirteen of theſe in ſeventy-ſeven minutes, and the laſt ſeemed to denote the inſtant of its death. In one of the ſmall ones, the final moment was marked by a convulſion of the ventral fins; but, in moſt of them, that, of all the external and regular motions, which laſted longeſt, was the motion of the lower jaw.

bious animal* whatever requires reſpiration; how could Swallows, thoſe daughters of the air, which ſeem deſtined to circle in that ſubtile fluid, live ſix months without breathing?

An animal which has been ſuffocated by drowning, may frequently indeed be recovered by ſtimulating the lungs, and applying gentle warmth †; but the experiment never ſucceeds unleſs the immerſion is recent. And ſuch inſtances are not at all analogous to the ſuppoſed reſuſcitation of Swallows from the bottoms of lakes. Their appearance or diſappearance has no relation to the quality of the ſeaſon; they leave us in autumn, when the weather is generally warmer than in ſpring, the period of their return. In the memorable year 1740 ‡, the Swallows made their appearance during the ſevere froſts, and many periſhed for want of

* Beavers, tortoiſes, ſalamanders, lizards, crocodiles, hippopotamuſes, whales, as well as frogs, riſe often out of the water in order to reſpire. Even ſhell-fiſh, which are, of all, the moſt aquatic, ſeem to require air, and mount from time to time to the ſurface, as in the pool-muſcle. *See* Mery in the Memoirs of the Academy of Sciences for 1710.

† I have thought it proper to inſert this ſentence, and omit the long detail which M. de Montbeillard gives of his recovering, by the ſimple application of heat, a Swallow that had fallen into a baſon of water and was taken out ſtiff and apparently dead. The methods uſed in this country for the recovery of drowned perſons are well known: warmth, gentle motion, and friction; the application of ſtimulants to the noſtrils, the inflation of the lungs, &c. T.

‡ Coll. Acad. *part. etran. t. XI. Acad. of Stock. p.* 51.

food;

food; and in the mild, and even warm, ſpring of 1774, they arrived no earlier than uſual.

The opinion that Swallows paſs the winter under water ſeems to have originated in this way: among the number which flock together at night among the ruſhes and aquatic plants, on their arrival and previous to their retreat, ſome may have been drowned by accident *; and the fiſhermen, finding them in their nets, would carry them to a ſtove, and thus reſtore them to life. And a paſſage in Ariſtotle induced the learned to aſcribe this ſubmerſion to thoſe of the northern countries only †, as if the diſtance of four or five hundred leagues would prove any bar to birds which can fly through the ſpace of two hundred leagues in a day, and which, by advancing farther ſouth, may always find a milder temperature, and a more abundant proviſion of their inſect food. That philoſopher indeed believed that the Swallows and ſome other birds lay hid during the winter; but his aſſertion was too general. There are inſtances, however, of chimney-ſwallows, ſand-martins, &c. being ſeen in mild winters: two ſand-martins were obſerved to circle about the caſtle of Mayac, in Perigord, the whole of the 27th of December, 1775, when there was a ſoutherly wind, attended with light rain: I

* In ſummer they are ſometimes found drowned in the meers.

† Hiſt. Anim. *Lib. VIII.* 12 & 16.

have a certificate ſigned by many reſpectable names to atteſt this fact. Theſe had, no doubt, been detained by late hatching, or were young birds unable to perform the migration, but fortunate enough to obtain a convenient retreat, a warm ſeaſon *, and the proper food. Some ſuch occurrences, which are probably more frequent in Greece than in the north of Europe, might diſpoſe Ariſtotle to think that all the ſpecies of Swallows remained concealed and dormant, during the winter months. Klein aſſerts, in fact, that the ſand-martins lie torpid in their holes †; and theſe are often ſeen in the winter at Malta, and even in France. M. de Buffon conjectured that the ſand-martins are leſs affected by cold than the other Swallows, ſince they haunt the brooks and rivers; and that, as they are probably of a colder temperament, and conſtruct their holes like thoſe animals which ſleep during the winter, they alſo undergo the

* In this year, 1775, the autumn was fine and not cold in that part of Burgundy where I live, which is two degrees more northerly than Perigueux. Of ninety-five days till the 27th of December, there were only twenty-ſeven in which the ſun did not ſhine: the thermometer never ſunk more than five or ſix degrees below nought ($20°\frac{3}{4}$ or $18°\frac{1}{2}$ Farenheit), and was often five or ſix above that point ($43°\frac{1}{4}$ or $45°\frac{1}{2}$ F.), even at the end of December: on the 27th, at ſun-riſe, it was three degrees above. ($38°\frac{3}{4}$ F.)

† To theſe are added, the ſwifts, the rails, the nightingales, the warblers; and M. Klein would wiſh to join many others. Were his ſyſtem realized, the earth could not furniſh caverns enow, nor the rocks holes. And the more general this hiding be ſuppoſed, the more would it be notorious. *See* Ordo Avium, *paſſim*.

ſame ſtate of inaction. Beſides, they may find inſects in the ground at all ſeaſons, and can therefore ſubſiſt when other Swallows muſt inevitably periſh. Inſtances of this kind may happen; but we muſt not infer that in winter they generally lodge thus concealed. Collinſon directed, in England, a bank which was quite bored by theſe birds to be carefully dug, in the month of October 1757, and yet not one could be found.

If, therefore, Swallows (I might ſay the ſame of all the birds of paſſage) can never obtain under water an aſylum congruous to their nature, we muſt return to the moſt ancient opinion, and the moſt conſonant to obſervation and experience. When the proper inſects begin to fail, theſe birds remove into milder climates, which ſtill afford that prey, ſo neceſſary to their ſubſiſtence *. This is the general and directing cauſe of migrations: thoſe which live upon winged inſects are the firſt to retire, becauſe their proviſions are ſooneſt deficient: thoſe which feed upon the *larvæ* of ants and other crawling inſects, find a more laſting ſupply, and are later in diſappearing. Thoſe birds, again, which eat berries, ſmall ſeeds, and fruits that ripen in autumn, and hang on the trees the whole winter, do not arrive until autumn, and ſettle among us the greateſt part of the winter.

* Swammerdam.

Thoſe which conſume the ſame proviſions with man, and live upon his ſuperfluities, reſide conſtantly in our vicinity. Laſtly, when a new ſpecies of culture is introduced into a country, it in the end occaſions new migrations. Thus after barley, rice, and wheat, were begun to be cultivated in Carolina, the coloniſts were ſurpriſed to ſee, regularly every year, numerous flocks of birds arrive, with which they were totally unacquainted, and hence denominated them *rice-birds*, *wheat-birds* *, &c. It is not unuſual in the American ſeas to behold immenſe troops of birds collected to prey on thoſe prodigious ſwarms of winged inſects which ſometimes darken the air †. In all caſes, it would appear, that neither the climate nor the ſeaſon, but the neceſſity of procuring ſubſiſtence ‡, directs the birds to migrate from one country to another, to traverſe the ocean, or to fix their permanent reſidence.

There is another cauſe alſo, which influences the migrations of birds, or at leaſt prompts them to return to their natal abode. Like all other

* Philoſophical Tranſactions, *No.* 483, *art.* 35.

† Second Voyage of Columbus.

‡ *It is probable* that the migrations of fiſhes, and even thoſe of quadrupeds, are ſubject to the ſame law, or rather to a law ſtill more general, which tends to the preſervation of each ſpecies and of each individual: for inſtance, I ſhould ſuppoſe that the flying-fiſh would never have employed their gills to fly, if they had not been purſued by the bonitos, the dorados, and other voracious fiſh; and perhaps the paſſage of birds of prey, which takes place in September, has ſome influence on the departure of the Swallows.

ſentient

ſentient beings, they cheriſh a partial tenderneſs to the place that gave them birth; there they felt their faculties firſt expand; there they taſted the freſh pleaſures of the morning of life: neceſſity compelled them to leave with regret the delicious ſpot; but its image ſtill dwells in their boſom, and inceſſantly awakens the ardent craving to return and to renew the felicity of their infant days *. But, not to enter into a general diſcuſſion on the ſubject, it appears that our Swallows retire in the month of October to the ſouthern countries; ſince they are obſerved about that time to leave Europe, and in a few days are found in Africa, and have even more than once been met with in their paſſage on the ocean. I know, ſays Peter Martyr, that the Swallows, the kites, &c. migrate from Europe on the approach of winter, and ſpend that ſeaſon on the coaſts of Egypt. Father Kircher, that advocate for the ſubmerſion of Swallows, but who confined it to the northern climates, affirms, from the accounts of the inhabitants of the Morea, that great numbers of Swallows paſs annually with the ſtorks, from Egypt and Lybia, into Europe †. Adanſon tells us that

* In that part of Lybia where the Nile has its ſource, the Swallows and the kites are ſtationary, and remain the whole year. *Herodotus, Lib. II.* The ſame thing is ſaid of ſome diſtricts of Ethiopia. There may be migratory and ſtationary Swallows in the ſame country, as at the Cape of Good Hope.

† See the *Mundus Subterraneus* of this Jeſuit. Theſe two laſt facts

that the Chimney-ſwallows arrive at Senegal about the ninth of October, and retire again in the ſpring; and that, on the 6th of October, when he was fifty leagues off the coaſt, between the iſland of Goree and Senegal, there alighted on his veſſel four birds, which he found to be real European Swallows; and he adds that they were fatigued, and ſuffered themſelves to be caught. In 1765, nearly in the ſame ſeaſon, the Company's ſhip, *Penthievre*, was over-ſpread, between the coaſt of Africa and the Cape de Verd iſlands, by a flight of white rumped Swallows (martins), which probably came from Europe *. Leguat, who was on the ſame ſeas on the 12th of November, alſo obſerved four Swallows which followed his veſſel ſeven days, as far as Cape Verd. We may remark that this is preciſely the time when bees ſwarm profuſely in Senegal, and when the gnats called *maringouins* are moſt troubleſome: in fact, this is the end of the rainy ſeaſon, when humidity and warmth at once favour the multiplication of inſects, eſpecially ſuch as the *maringouins*, which hover about wet places †. Chriſtopher

confirm my notion, that, even in warm countries, there is a ſeaſon for the generation of inſects, of thoſe at leaſt which ſupport the Swallows.

* Note communicated by the Viſcount de Querhoent.

† Conſult *Voyage au Senegal*, par M. Adanſon, pp. 36, 82, 139, 141, 157. I ſee alſo that clouds of graſshoppers ſpread over theſe countries in the month of February (*ib. p.* 88). Is the generation of inſects there fixed to a particular ſeaſon?

Columbus,

Columbus, in his ſecond voyage, ſaw one near his veſſels on the 24th of December, though ten days before he diſcovered St. Domingo *. Other navigators have met with them between the Canaries and the Cape of Good Hope †. In the kingdom of Iſſini, according to the miſſionary Loyer, multitudes of Swallows arrived from other countries in October and the following months ‡. Edwards aſſures us that the Swallows leave England in autumn, and that the Chimney-ſwallow kind are found in Bengal §. Swallows are ſeen the whole year at the Cape of Good Hope, ſays Kolben, but they are more numerous in winter; which ſhews that ſome are there permanent ſettlers and others migratory, for it cannot well be ſaid that they ſleep under water or lurk in holes during ſummer. The Swallows of Canada, Father Charlevoix tells us, are birds of paſſage as well as thoſe of Europe. Thoſe of Jamaica, according to Dr. Stubbs, leave the iſland in the winter months,

* Herrera, *Lib. II.* 1.

† Voyage aux Iles de France & de Bourbon. *Merlin*, 1773.

‡ Hiſt. Gen. des Voyages, *t. III. p.* 422.

§ Other obſervers, who have examined more particularly, affirm, that the Swallows leave England about the 29th of September; that their general rendezvous is held on the coaſts of Suffolk, between Orford and Yarmouth; that they alight on the roofs of churches, on old walls, &c.; that they remain ſeveral days when the wind is not fair for croſſing the ſea; that if the wind changes during the night, they all diſappear at once, and not one can be found next morning.

though

though ever ſo warm *. Every body knows the ſingular and happy experiment of Friſch, who faſtened a dyed thread to the feet of ſome of theſe birds, and ſaw them the following year with this thread not in the leaſt diſcoloured; a ſufficient proof that theſe individuals, at leaſt, did not winter under water, and a ſtrong preſumption that none of the ſpecies ever do. We may expect that when Aſia and certain parts of Africa are better known, we ſhall diſcover the different ſtations not only of the Swallows, but of moſt of the birds which the inhabitants of the iſlands in the Mediterranean perceive every year advancing or retiring. They cannot undertake their diſtant voyages unleſs they be aſſiſted by a favourable breeze; and when they are ſurpriſed, in the middle of their courſe, by contrary winds, they become exhauſted with fatigue, and alight on the firſt veſſel they meet with, as ſeveral navigators have witneſſed in the ſeaſon of migration †. They may ſometimes chance to fall into the ſea and periſh in the waves; and then, if ſeaſonably fiſhed out and properly taken care

* Philoſophical Tranſactions, No. 36.

† Admiral Wager thus writes Mr. Collinſon: "Returning home in the ſpring of the year, as I came into ſoundings in our channel, a great flock of Swallows came and ſettled on all my rigging; every rope was covered; they hung on one another like a ſwarm of bees; the decks and carving were filled with them. They ſeemed almoſt famiſhed and ſpent, and were only feathers and bones; but being recruited with a night's reſt, took their flight in the morning." The ſame thing happened to Mr. Wright, maſter of a ſhip, on his return from Philadelphia.

of,

of, they may be revived. But it is evident that ſuch accidents cannot happen in lakes or narrow ſeas. In moſt countries the Swallows are held the friends of men, and very juſtly, ſince they deſtroy vaſt numbers of pernicious inſects. The goat-ſuckers are entitled to the ſame regard; but themſelves and their benefits are concealed and neglected in evening ſhades.

My firſt idea was to ſeparate the martins from the Swallows, and to imitate nature, which has ſeparated them by implanting reciprocal antipathies. They are never ſeen aſſociated together, though the three ſpecies of Swallows join ſometimes in the ſame flock. The martins are diſtinguiſhed too by their ſhape, their habits, and their diſpoſitions. 1. By their ſhape: their legs are ſhorter, and entirely unfit for walking or for riſing on the wing from ſmooth ground; beſides, their four toes are turned forward, and each of them has only two phalanges, including the nail. 2. By their habits: they arrive later and retire earlier, though they ſeem to ſhun more the heat; they breed in the crevices of old walls, and as high as they can get; they build no neſt, but line the hole well with coarſe litter, in which reſpect they reſemble the bank-ſwallows (ſand-martins); when they go a-foraging, they fill their craw with winged inſects of all kinds, ſo that they need to feed their young only twice or thrice in the day. 3. By their

their diſpoſitions: they are more ſhy and timid than the Swallows; the inflections of their voice are leſs varied, and their inſtinct ſeems more confined.

Such obvious differences, therefore, ſubſiſting between theſe birds, I ſhould not heſitate to diſcriminate them; but there are many foreign ſpecies, which it would be difficult to refer each to its proper claſs. It will be more prudent, then, not to attempt the diviſion, but to arrange them as their exterior conformation moſt readily ſuggeſts.

Nor ſhall we diſtinguiſh the Swallows of the old and of the new world, becauſe they exactly reſemble each other, and becauſe the ocean can prove no barrier to birds that fly ſo ſwiftly, and can equally endure every climate.

The CHIMNEY, or DOMESTIC SWALLOW *.

Hirundo Ruſtica, Linn. Gmel. Klein. &c. &c.
Hirundo Domeſtica, Ray. Will. and Briſſ. †

THE inſtinct of this bird is really domeſtic; it prefers the ſociety of man; it neſtles on our chimney-tops, and even within our houſes, eſpecially when theſe are quiet and ſtill. If the houſes be too cloſe and the vents covered above, as they are in Mantua and in mountainous countries, on account of the great falls of ſnow and rain, it changes its lodgment, without loſing its attachment, and it finds a retreat in the roofs. But it never ſtrays far from the dwellings of men; and the weary forlorn traveller is rejoiced

* In Swediſh, *Ladu-Swala*, or Barn-ſwallow.

† Aldrovandus ſuppoſes that the Ανοπαια of Homer, *Odyſſ.* I. 320, which the commentators have been ſo much puzzled to interpret, is the common ſwallow. The lines in which the word occurs, are theſe:

Ἡ μεν αρ' ὡς ειπῶσ' 'απέβη γλαυκῶπις 'Αθηνη,
Ορνις δ' ὡς 'ανοπαια διέπτατο.

Euſtathius ſuppoſes that αιοπαια is a ſpecies of eagle, and Mr. Pope prudently alters the expreſſion:

" Abrupt, with *eagle-ſpeed* ſhe cut the ſky;
" Inſtant inviſible to mortal eye."

It is the Ποικιλη Χελιδων (variegated ſwallow) of Ariſtophanes; the Δαυλιδης Ορνις (Daulian bird) of Plutarch; the *Aredula* of Cicero; the *vaga volucris* of Ovid.

to

to ſee the harbinger of ſafety. We ſhall ſoon find that the ſwift is more roving in its excurſions.

The common Swallow is the firſt that appears in our climates, and generally a little after the equinox of ſpring; but rather earlier in the ſouthern countries, and later in the northern. And yet though the month of February and the beginning of March be unuſually mild, or the end of March and the beginning of April uncommonly cold, they hardly ever arrive in any place before their ordinary time *, and ſometimes they glide through the thick flakes of deſcending ſnow. In 1740, the ſwallows ſuffered extremely; they gathered in great numbers about a brook which ſkirted a terrace then belonging to Mr. Hebert, where every minute ſome fell dead †, and the water was covered with their dead bodies: nor was exceſſive cold the cauſe of their death; it was evidently the want of food, and thoſe picked up were reduced to mere ſkeletons; the walls of the terrace were their laſt

* Pliny, *Lib. XVIII.* 26, ſays that Cæſar mentions ſwallows ſeen on the eighth of the Calends of March (22 February); but this is a ſingle fact, and perhaps the birds were Sand-Martins.

† "In 1767, they were found extended and lifeleſs on the brink of the pools and rivers of Lorraine." *Note communicated by M. Lottinger.* Theſe facts render very ſuſpicious at leaſt the preſentiment of temperatures which a paſtor of Nordland and ſome others have thought proper to aſcribe to the ſwallows. *See* Collec. Acad. *Part Etran. T. XI. Acad. Stock. p.* 51.

reſort,

reſort, and they greedily devoured the dried flies that hung from the old ſpiders webs.

A bird, which announces the return of the ſmiling ſeaſon, and which is innocent and even uſeful, might be treated with gratitude; and by the bulk of mankind, it is venerated with a degree of affection bordering upon ſuperſtition *. Yet is the ſwallow often the ſubject of cruel ſport; and the expert markſman is eager to diſplay his ſkill in ſhooting it on the wing: and what is ſingular, the firing of the piece rather attracts than ſcares theſe harmleſs creatures; this war is worſe than ridiculous, and the various inſect tribes which prey in our gardens, in our fields, and in our foreſts, are thus ſuffered to extend their ravages †.

The experiment of Friſch ‡ and other ſimilar ones, prove that ſwallows return to the ſame haunts. They build annually a new neſt, and fix it, if the ſpot admits, above that occupied the preceding year. I have found them in the ſhaft of a chimney thus ranged in tires; counted

* The Swallows have been ſaid to be under the immediate protection of the *Dii Penates:* When ill uſed, they bit the cows' udders, it was alleged, and made them loſe their milk. Theſe were uſeful illuſions.

† See Journal de Paris, *annee* 1777. It is true that they ſometimes alſo deſtroy uſeful inſects, ſuch as bees; but they can always be prevented from building their neſts near the hives.

‡ In a caſtle near Epinal in Lorraine, a few years ago, a ring of braſs wire was faſtened to the foot of one of theſe Swallows, which it faithfully brought back on the following ſeaſon. Heerkens in his poem, *Hirundo,* cites another fact of this kind.

four

four one above another, and all of equal ſize, plaſtered with mud mixed with ſtraw and hair. There were ſome of two different ſizes and ſhapes: the largeſt reſembled a hollow half cylinder *, open above, and a foot in height, and attached to the ſides of the chimney; the ſmalleſt were ſtuck in the corners of the chimney, and formed only the quarter of a cylinder, or even an inverted cone. The firſt neſt, which was the loweſt, had the ſame texture at the bottom as at the ſides; but the two upper tires were ſeparated from the lower by their lining only, which conſiſted of ſtraw, dry herbs, and feathers. Of the ſmall neſts built in the corners, I could find only two in tires, and I ſuppoſe they belonged to young pairs; they were not ſo well compacted as the large ones.

In this ſpecies, as in many others, it is the male that ſings the amorous ditty †: but the female is not entirely mute; in the love-ſeaſon ſhe twitters more fluently, ſhe warmly receives his careſſes, and ſometimes, by her ſportive friſks, ſhe rouſes and ſtimulates his paſſion. They have two hatches in the year, the firſt

* Friſch ſays, that the bird gives to its neſt this circular or rather ſemicircular form, by making its foot the centre.

† The Greeks expreſs this note by theſe words, Ψιθυριζειν, Τιτυβιζειν, and the Latins by theſe other names, *Drirſare*, or *Trinſare*, *Zinzilulare*, *Fritinnire*, *Minuriſare*. M. Friſch tells us, that, of all the ſwallows, the domeſtic one has a cry neareſt reſembling a ſong, though it conſiſts only of three tones, terminated by a *finale*, which riſes to a fourth, and it is little varied.

containing

containing five eggs, the ſecond three: theſe are white according to Willughby, and ſpotted according to Klein and Aldrovandus: what I ſaw were white. While the female ſits, the male ſpends the night on the brim of the neſt; he ſleeps little, for his twittering is heard at the earlieſt dawn, and he circles till almoſt the cloſe of the evening. After the young are hatched, both parents perpetually carry food, and are at great pains to keep the neſt clean, till the brood learn to ſave them that trouble. But it is pleaſing to ſee them teaching their family to fly, encouraging them with their voice, preſenting food at a little diſtance, and retiring as the young ones ſtretch forward; preſſing them gently from the neſt, fluttering before them, and offering, in the moſt expreſſive tone, to receive and aſſiſt them. Boerhaave tells us that a Swallow returning with proviſion to its neſt, and, finding the houſe on fire, ruſhed through the flames to feed and protect her tender brood. How ſtrong the attachment to their progeny!

It has been ſaid that when their young had their eyes ſunken or even torn out, the mothers cured them by the application of the herb *chelidonia* *, or ſwallow-wort †, deriving its

* From Χελιδων, a ſwallow. The common Engliſh name *celandine*, ſeems to be only ſoftened from *chelidonia*. The plant is ranged by Linnæus next the poppy. T.

† *Ut quidam volunt, etiam erutis oculis.* Pliny, *Hiſt. Nat. Lib. XXV.* 8. Dioſcorides ſays nearly the ſame thing, *Lib. II.* 211. Ælian reſtricts it to the white Swallows, *Lib. XVII.* 20.

name from that imaginary quality. But the experiments of Redi and De la Hire prove, that no ſimples are needed, and that, in the infant brood, the eyes, though burſt and ſunken, ſoon ſpontaneouſly recover *. Ariſtotle knew this fact †, Celſus repeats it ‡, and the obſervations of Redi and De la Hire, and ſome others §, inconteſtibly prove it.

Beſides the different inflections of voice which I have already noticed, the common ſwallows have their cry of invitation, their cry of pleaſure, their cry of fear, their cry of anger, that by which the mother warns her young of the dangers which threaten, and many other expreſſions compounded of theſe; a proof of their great ſuſceptibility of the internal ſentiments.

Since the winged inſects fly higher or lower according to the greater or leſs degree of heat, the Swallows ſometimes, in the purſuit of their prey, ſkim along the ſurface, and gather it on the ſtems of herbs, on the graſs, and even on the pavement of ſtreets. When the ſcarcity is great, they raviſh the flies from the ſpider's web, and even devour the ſpiders themſelves ||.

* Redi made his experiments on pigeons, hens, geeſe, ducks, and turkies. *See* Coll. Acad. *Part Etran. T. IV. p.* 544. alſo *T. II. Part. Fran. p.* 75.

† *Hiſt. Anim.* Lib. II. 17, and Lib. VI. 5, and *De Generatione*, Lib. IV. 6. Ariſtotle ſays the ſame thing of ſerpents.

‡ Lib. VI. *De Re Medica.*

§ For inſtance, Dr. J. Sigiſmond Elſholtius. Coll. Acad. *Part. Etran. T. III. p.* 324.

|| Friſch.

Their

Their ſtomach is found to contain fragments of flies, graſshoppers, beetles, butterflies, and even bits of gravel *, a proof that at times they catch their prey on the ground: and in fact, though the domeſtic Swallows ſpend moſt of their lives in the air, they often alight on the roofs of houſes, on iron bars, and even on the ſurface of the earth, and on trees. In our climate, they often paſs the night about the end of ſummer perched on alders that grow on the banks of rivers; and in that ſeaſon numbers are caught, which are eaten in ſome countries †. They prefer the loweſt branches under the brinks, and well ſheltered from the wind ‡; and it is remarked that the branches where they commonly ſit during the night wither away.

They alſo aſſemble on a large tree previous to their retreat; the flocks then amount only to three or four hundred, for the ſpecies is far from being ſo numerous as the window Swallows (martins). In this country they commence their expedition about the beginning of October, and uſually ſteal off in the night to avoid the birds of prey, which ſeldom fail to haraſs them on their

* Belon and Willughby. Many abſurdities have been told of theſe ſwallow-ſtones and their virtues, as of eagle-ſtones, cock-ſtones, and other bezoars, which ſeem ever to have been the favourite jewels of empiriciſm and of credulity.

† At Valencia in Spain, at Lignitz in Sileſia, &c. *See* Willughby and Schwenckfeld.

‡ Note of Hebert. Lottinger aſſures me that they alſo frequent ſometimes the coppices.

route. Friſch ſaw them frequently ſet out in broad day, and Hebert, more than once, obſerved, about the time of their retreat, parties of forty or fifty gliding aloft in the air, and remarked that their flight was not only much higher than ordinary, but more uniform and ſteady. They ſtretch towards the ſouth, taking advantage, as much as poſſible, of favourable winds; and when no obſtacles interfere, they uſually arrive in Africa in the firſt week of October. If they be checked by a ſouth-eaſt wind, they halt, like the other birds of paſſage, in the iſlands that lie in their track. Adanſon ſaw them arrive on the ſixth of October, at half paſt ſix in the evening, on the coaſt of Senegal, and found them to be real European ſwallows; he afterwards diſcovered that they are never ſeen in thoſe countries but in autumn and winter. He tells us that they lie every night ſingle, or two by two, in the ſand by the ſea ſhore*; and ſometimes numbers lodge on the huts, perching upon the rafters. Another important obſervation he adds, that they never breed in Senegal†; and accordingly Friſch remarks that young Swallows never arrive in the ſpring. Hence

* This habit of lying in the ſand is entirely contrary to what we ſee in Swallows in our climate; it muſt depend on ſome particular circumſtances that eſcaped the obſerver; for animals are more capable, than uſually ſuppoſed, of varying their mode of life according to their ſituation.

† It is alſo ſaid that no ſpecies of Swallow neſtles in Malta.

we

we may infer that theſe birds are natives of more northern climates.

Though the Swallows are in general migratory, even in Greece and in Aſia, ſome will remain during the winter, eſpecially in the mild climates where inſects abound; for example, in the iſles of Hières and on the coaſt of Genoa, where they ſpend the night in the open country on the orange ſhrubs, which they injure greatly. On the other hand, they are ſaid to appear ſeldom in the iſland of Malta.

Theſe birds have ſometimes been employed to convey important intelligence*: for this purpoſe, the mother is taken from her eggs and carried to the place whence the news is to be ſent, and a thread is tied to the feet, with the number of knots and the colour previouſly concerted. The affectionate mother flies back to her brood, and tranſports the billet with incredible expedition.

The chimney Swallow has its throat and front of an orange tint, and there are two ſtreaks above the eye, of the ſame colour, all the reſt of the under ſide of the body is whitiſh, with an orange caſt; all the reſt of the upper part of the head and body is of a brilliant bluiſh black, the only colour which appears when the feathers are compoſed, though they are cinereous at the baſe, and white in the middle; the quills of the

* *See* Pliny, *Nat. Hiſt. Lib. X.* 24.

wings are, according to their different poſitions, ſometimes of a bluiſh black, which is lighter than the upper ſurface of the body, and ſometimes of a greeniſh brown; the quills of the tail are blackiſh, with green reflections; the five lateral pairs marked with a white ſpot near the end; the bill is black without, and yellow within; the palate and the corners of the mouth are alſo yellow, and the legs blackiſh. In the males the orange tint on the throat is more vivid, and the white of the under ſide of the body has a ſlight caſt of reddiſh.

The average weight of all thoſe which I have tried is about three gros. They are apparently larger than the window Swallows (martins), and yet they are lighter.

Total length ſix inches and a half; the bill forms a curvilineal iſoſceles triangle, whoſe ſides are concave, and about ſeven or eight lines; the tarſus five lines, without any down; the nails thin, ſlightly curved, and much pointed, and the hind one is the ſtrongeſt; the alar extent, a foot; the tail three inches and a quarter, much forked, though leſs ſo in the young birds, conſiſting of twelve quills, of which the outer pair exceeds the next by an inch, and the middle pair by fifteen or twenty lines, and the wings by four or five lines; it is generally longer in the male.

I have received, as varieties, ſome in which the

the colours were all fainter, and the tail little forked; theſe were probably young ones.

Among the accidental varieties I place the following. *Firſt*, The white Swallows: there is no country in Europe where theſe have not been ſeen, from the Archipelago to Pruſſia *. Aldrovandus tells how to obtain them of that colour; according to him, we need only rub their egg with olive-oil. Ariſtotle imputes this whiteneſs to weakneſs of conſtitution, want of food, and the action of cold. In a ſubject, which I had occaſion to obſerve, there were ſome ſhades of rufous above the eyes and under the throat, and ſome traces of brown on the neck and the breaſt, and the tail was ſhorter; perhaps its faint colours were owing to moulting, for though white Swallows are frequently ſeen before their paſſage, it is unuſual to find ſuch on their return †. Some are obſerved to be only partly white, as was the one mentioned by Aldrovandus, which had its rump of that colour.

In the *ſecond* place, I conſider as an accidental variety, the rufous Swallow, of which the orange tint of the throat and eye-lids ſpreads over

* At Samos, according to the ancients; in Italy, in France, in Holland, in Germany, according to the moderns.

† In a hatch of five young, at the Trinitarians of la Motte, in Dauphiny, were two white Swallows which paſſed the whole year in the country, but returned not the following year. *Note of the Marquis de Piolenc.*

almoſt the whole of the plumage, but grows more dilute, and verges upon pink *.

The chimney Swallows are ſcattered through the whole of the ancient continent, from Norway to the Cape of Good Hope, and in the Aſiatic regions, as far as India and Japan †. Sonnerat brought a ſpecimen from the Malabar coaſt ‡, which differs only in being rather ſmaller, owing probably to the contraction in drying. Seven other Swallows brought from the Cape of Good Hope, by the ſame gentleman, were exactly ſimilar in appearance to ours; but on a narrow inſpection, it was found that the under part of the body was of a finer white, and the ſcalloping, which, in the ten lateral quills of the tail, divides the broad from the narrow part, was larger.

I ſhall now deſcribe ſuch as are to be regarded as varieties of climate [A].

* The Count de Riolet aſſured me that he ſaw two individuals of this colour in a flock of chimney Swallows.

† Edwards and Kæmpfer.

‡ G. I. Camel had long before inſerted the Swallow, under the name of *Layang-layang*, in the catalogue of European birds found in the Philippines. *Philoſ. Tranſ. No.* 285. *Art. III.*

[A] Specific character of the Common Swallow, *Hirundo Domeſtica:* "Its tail-quills, the two mid-ones excepted, are marked with a white ſpot." Mr. White has given a very accurate and diſtinct hiſtory of this bird. *Natural Hiſtory of Selborne, pp.* 167—172.

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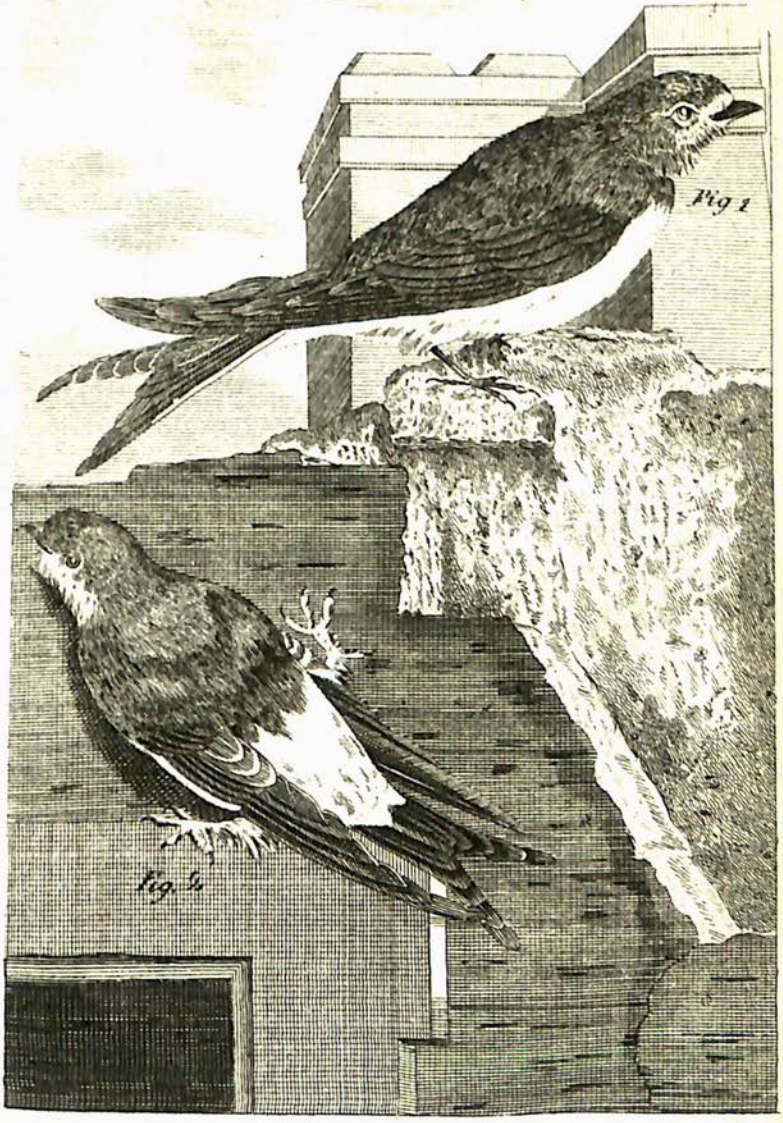

FIG.1.THE CHIMNEY SWALLOW FIG.2.THE MARTIN.

VARIETIES of the COMMON SWALLOW.

I. THE ANTIGUA SWALLOW, with a ruſty-coloured throat*. It is rather ſmaller than the common Swallow; its front bears a band of ruſty yellow; under the throat there is a ſpot of the ſame colour, terminated below by a very narrow black collar; the forepart of the neck and the reſt of the under ſurface of the body, white; the head, the upper ſide of the neck and back, velvet black; the ſmall ſuperior coverts of the wings of a changeable violet; the great coverts and alſo the quills of the wing and tail, are coal black; the tail forked and projects not beyond the wings.

II. THE RUFOUS-BELLIED SWALLOW OF CAYENNE †. Its throat is rufous, and this colour extends over all the upper ſide of the body, gradually ſhading off; all the reſt of the upper ſide of the body is of a fine ſhining black. It is rather ſmaller than the common Swallow.

* *Hirundo Panayana*, Gmel.
The *Panayan Swallow*, Lath.

Specific character: "It is black, below white; a ſpot on its front and its throat, ferruginous yellow; its collar black.

† *Hirundo Rufa*, Gmel.
The *Rufous-bellied Swallow*, Lath.

Specific character: "It is gloſſy black, below rufous, its front whitiſh."

Total length about five inches and a half; the bill ſix lines; the tarſus four or five; the hind toe five.

Swallows of this kind alſo make their neſt in houſes; they give it a cylindrical form with ſmall ſtalks, moſs, and feathers, and ſuſpend it vertically detached from the building; they lengthen the ſtack in proportion as they multiply; the aperture is placed below in one of the ſides, and ſo nicely conſtructed that it communicates with all the ſtories. They lay four or five eggs.

It is not improbable that ſome of our ſwallows having migrated into the new continent, have there founded a colony, which ſtill reſembles the parent breed.

III. THE RUFOUS-COWLED SWALLOW *. This rufous is deepened and variegated with black; the rump is alſo rufous, terminated with white; the back and the ſuperior coverts of the wings are of a fine black, verging upon blue, with the gloſs of burniſhed ſteel; the quills of the wings brown, edged with a lighter brown; thoſe of the tail blackiſh; all the lateral ones marked on the inſide with a white ſpot, which does not appear unleſs the tail is ſpread; the throat is variegated with whitiſh and brown: laſtly, the under ſide of the body is ſprinkled

* *Hirundo Capenſis*, Gmel.
The *Cape Swallow*, Lath.

with

with ſmall longitudinal blackiſh ſpots on a pale yellow ground.

The Viſcount Querhoent, who had an opportunity of obſerving this ſwallow at the Cape of Good Hope, informs us that it breeds in houſes like the preceding varieties; that it fixes its neſt againſt the ceilings of rooms; that it uſes earth for the outer coat, and lines it with feathers; that the ſhape of its neſt is roundiſh, with a ſort of hollow cylinder fixed to it, which is the only aperture. He adds that the female lays four or five dotted eggs.

FOREIGN BIRDS,

WHICH ARE RELATED TO THE COMMON SWALLOW.

I.

The GREAT RUFOUS-BELLIED SWALLOW of SENEGAL.

Hirundo Senegalenſis, Linn. Gmel. and Briſſ.
The *Senegal Swallow*, Lath.

ITS tail is ſhaped like that of the common Swallow; and its plumage is marked with the ſame colours, though differently diſtributed: it is much larger, and moulded after other proportions; ſo that it may be regarded as a diſtinct ſpecies. The upper ſide of the head and neck, the back and the ſuperior coverts of the wings, are of a brilliant black, with a ſteel gloſs; the quills of the wings and of the tail are black, the rump rufous, and all the lower parts; but the throat and the inferior coverts of the wings are much diluter, and almoſt white.

Total length eight inches and ſix lines; the bill eight lines; the tarſus the ſame; the hind nail and toe the longeſt next to thoſe of the middle; the alar extent fifteen inches three lines; the tail four inches, forked, and conſiſting

ing of twenty-ſix quills; it projects an inch beyond the wings [A].

II.

THE WHITE-CINCTURED SWALLOW.

Hirundo Faſciata, Gmel.
The *White-bellied Swallow*, Lath.

It has no rufous in its plumage, which is entirely black, except a white belt on the belly, conſpicuous on that dark ground: there is alſo a little white on the thighs; the quills of the tail are black above and brown below.

It is a rare bird; found in Cayenne and Guiana in the interior parts of the country, on the banks of rivers. It delights to ſweep along the ſurface of water, like the European Swallows; but, different from them, it alights on the trunks that float down the ſtream.

Total length ſix inches; the bill black, and meaſures ſix lines; the tarſus alſo ſix lines; the tail two inches and a quarter, and forked near eighteen lines; it exceeds the wings four lines [B].

[A] Specific character: "It is gloſſy black, below rufous; its rump rufous."

[B] Specific character: "It is black; a croſs bar on its belly, and an external ſpot on its legs, white."

III.

The AMBERGRIS SWALLOW.

Hirundo Ambroſiaca, Gmel.
Hirundo Riparia Senegalenſis, Briſſ.
Hirundo Marina Indigena, Seba.
Hirundo Ambram Griſeam redolens, Klein.

SEBA ſays that theſe Swallows, like our ſand martins, repair to the beach when the ſea is agitated, and that they were ſometimes brought to him both dead and alive, and ſmelt ſo ſtrongly of ambergris, that one of them was enough to perfume a room. He thence conjectures that they feed on inſects, and other odorous animalcules, or perhaps on ambergris itſelf. The one deſcribed by Briſſon was ſent from Senegal by Adanſon; but the bird is ſometimes ſeen likewiſe in Europe.

All its plumage is of a ſingle colour, which is brown-gray, darker on the head and on the quills of the wings than on the other parts; the bill is black, and the legs brown; the ſize of the bird exceeds not that of the gold-creſted wren.

I have heſitated whether I ſhould not range it with the ſand martins, which it reſembles in ſome reſpects; but, as its economy is unknown, and as its tail is formed like that of the domeſtic

Swallow,

Swallow, I have meanwhile referred it to that ſpecies.

Total length five inches and a half; the bill ſix lines; the tarſus three; the hind toe the ſhorteſt; the alar extent above eleven inches, forked about eighteen lines, and conſiſting of twelve quills; it projects four lines beyond the wings.

[A] Specific character: "It is gray-brown; its bill blackiſh; its legs brown."

The MARTIN*.

L'Hirondelle au Croupion Blanc, ou L'Hirondelle de Fenetre, Buff. †
Hirundo Urbica, Linn. Gmel. Kram. Friſ. &c.
Hirundo Ruſtica, ſive Agreſtis, Ray, Will. and Briſſ.
Hirundo Sylveſtris, Geſner.
The *Martin*, *Martlet*, or *Martinet*, Will. Alb. Penn. and Lath.

THE epithet *rural* was by the ancients juſtly applied to this bird, which, though much more familiar than the ſand martin, is ſhyer than the domeſtic ſwallow. It delights to build its neſt againſt the crags of precipices that overhang lakes ‡; and it never breeds near our

* The Greek name, Χελιδων, we are told by Ælian, ſignified a fig, and was transferred to the ſwallow, becauſe the appearance of this bird announces the ſeaſon of fruits. It was alſo called Ακανθυλλις.

Pliny ſtyles the Martin *Hirundo Ruſtica* and *Hirundo Agreſtis*; Lib. X. 43, &c.

In German it has a variety of names, *Kirch-Schwalbe*, *Mur-Schwalbe*, *Berg-Schwalbe*, *Dach-Schwalbe*, *Fenſter-Schwalbe*, *Lauben-Schwalbe*, *Leim-Schwalbe* (*i. e.* the church, wall, rock, roof, window, leaf, lime Swallow), and *Mur-Spyren*, *Munſter-Spyren*, *Wyſſe-Spyren* (*i. e.* the wall, cathedral, white Martlet). In Swediſh, *Hus-Swala*: In Daniſh, *Bye-Svale*, *Tag-Skiægs-Svale*, *Hvid-Svale*, *Rive-Skarſteens-Svale*: In Norwegian, *Huus-Svale*.

† *i. e.* The White-rumped or Window Swallow.

‡ This obſervation is M. Hebert's. Theſe ſwallows are well known to neſtle on rocks. *See* Geſner, *Aves*, p. 565. M. Guys, of Marſeilles, has aſſured me of this fact; but we muſt abate from the exaggerated accounts of the ancients, of a very ſolid bank, a ſtadium in length, formed entirely by theſe neſts, in the port of Heracleum in Egypt; and of another ſimilar bank conſtructed alſo by theſe birds in an iſland ſacred to Iſis. *See* Plin. *Lib. X.* 33.

houſes,

houſes, if it can elſewhere find a convenient ſituation.

The neſt which I obſerved in the month of September, and which had been broken off from a window, was compoſed externally of earth, particularly of the ſoft mould thrown up in the morning by worms in new-delved borders; the middle was ſtrengthened by an intermixture of ſtraw chips, and the inſide was bedded with a heap of feathers*; the duſt in the bottom ſwarmed with hairy worms, which writhed and crawled nimbly in all directions, and were moſt numerous where the feathers ſtuck into the ſides; there were alſo ſome fleas, bigger and browner than ordinary, and ſeven or eight bugs, creeping at large, though none of theſe could come from the houſe. The three young ones, which were able to fly, and the parents, I am confident, ſlept together at night. The neſt reſembled the quarter of a hollow hemiſpheroid of a deep ſhape, its radius four inches and a half, ſticking by its two lateral ſurfaces to the jamb and the window frame, and by its upper ſurface to the lintel; the entrance was near the lintel, placed vertically, very narrow and ſemicircular.

The ſame neſts ſerve for ſeveral years, and probably to the ſame pair; but this is the caſe with regard to ſuch only as are built in our

* I found four or five gros of theſe feathers in a neſt that weighed in all but thirteen ounces.

windows, for I am aſſured that thoſe conſtructed againſt rocks are renewed annually. Sometimes five or ſix days are ſufficient for performing the work, and ſometimes ten or twelve are required; the birds carry the mortar both with their little bill and with their toes, but plaſter with their bill only. It often happens that ſeveral Martins are ſeen labouring at the ſame neſt*; either from their complaiſance in aſſiſting each other, or becauſe this ſpecies copulating only in the neſt, all the males which court the ſame female are eager to haſten the fabric, and obtain the expected joy. Yet ſome have been obſerved as aſſiduous in pulling down the ſtructure as others were forward to rear it. Perhaps it was a diſcarded lover, who gratified his malice by retarding the fruition of his more fortunate rivals.

The Martins arrive ſooner or later, according to the latitude: at Upſal on the 9th of May, as Linnæus tells us; in France and England in the beginning of April †, eight or ten days after the domeſtic ſwallows, which, according to Friſch, as they fly lower, can more eaſily and earlier procure their food: they are ſometimes ſurpriſed

* I have counted five ſtanding within the ſame neſt or clinging round it, without reckoning the comers and goers: the more numerous they are, the more expeditious is the work.

† This year, 1779, the winter has been without ſnow, and the ſpring very fine; yet theſe ſwallows arrived not in Burgundy till the 9th of April, and on the lake of Geneva till the 14th. It is ſaid that

ſurpriſed by the ſpring colds, and have been ſeen ſhooting through a thick fall of ſnow *. On their firſt arrival they haunt the wet places; I never ſaw them return to the neſts which are in my windows before the 15th of April, and ſometimes not till the beginning of May. They build in all aſpects, but prefer ſuch as look into the fields, eſpecially when the ſcene is interſperſed with rivers, brooks, or pools. They

that a ſhoemaker in Baſil, having put a collar on a ſwallow with this inſcription,

Hirondelle,
Qui es ſi belle
Dis-moi, l'hiver ou vas-tu!
(Pretty ſwallow, tell me whither thou goeſt in winter?)

Received, the ſpring following, by the ſame courier, this anſwer:

A Athenes
Chez Antoine,
Pourquoi t'en informes-tu!
(To Anthony at Athens; why doſt thou inquire?)

The moſt probable part of this anecdote is, that the verſes were made in Switzerland. Belon and Ariſtotle aſſure us that the ſwallows live only half the year in Greece, and go to paſs the winter in Africa.

* This proves that what Hoegſtroem, the paſtor of Nordland, ſays of the fore-knowledge of temperatures, which he aſcribes to the ſwallows, is not more applicable to that of the window than to that of the chimney, and muſt be regarded as very doubtful. "In Lapland," ſays he, "ſwallows have been ſeen to depart, and *abandon their young* in very warm weather, and when there was no appearance of a change in the air. But this change ſpeedily came, and one might travel in a ſledge by the 8th of September. In certain years, on the contrary, they have ſtaid very late, though the weather was not mild; whence it might be inferred that the cold was diſtant." In all this the reverend paſtor ſeems to be only the echo of popular rumour, and to have taken no pains to aſcertain the fact, which is beſides contradicted by accurate obſervations.

breed, at times, within houſes; but this is exceedingly rare, and even very difficult to obtain *. The young are ſometimes hatched as early as the 15th of June; the cock and hen may be ſeen toying with each other on the brink of the half-formed fabric, and billing with a ſhrill expreſſive chirp †; but they are never obſerved to copulate, which makes it probable that this is done in the neſt, ſince this chirping is heard early in the morning, and ſometimes during the whole night. Their firſt hatch conſiſts of five white eggs, with a duſky ring near the large end; the ſecond hatch conſiſts of three or four, and the third, when it does take place, of two or three. The male ſeldom or never removes from his mate

* "It rarely builds in houſes," ſays Ariſtotle, which is confirmed by daily obſervation. The late M. Rouſſeau, of Geneva, after infinite pains, ſucceeded to make them neſtle in his chamber. M. Hebert ſaw them build on the ſpring of a bell; the bottom of the neſt reſted on this ſpring, the upper brim, which was ſemicircular, leaned againſt the wall by its two ends, three or four inches below the eave: the cock and hen, during the time they were employed in the conſtruction, paſſed the nights on the iron ſpike to which the ſpring was faſtened. The frequent concuſſion given by this ſpring could not fail to diſturb the action of nature in the developement of the little embryons; the hatch accordingly did not ſucceed: yet the pair would not forſake their tottering manſion, but continued to inhabit it the reſt of the ſeaſon. The ſemicircular form which, on this occaſion, they gave their neſt, proves that they can ſometimes change their order of architecture.

† Friſch pretends that the males of this ſpecies ſing better than thoſe of the domeſtic ſwallow; but in my opinion it is quite the reverſe.

during

during incubation; he watches for her ſafety and that of the young brood, and darts impetuouſly on the birds that chance to approach too near. After the eggs are hatched, both parents frequently carry food, and ſeem to beſtow the moſt affectionate care*. In ſome caſes, however, this paternal attachment appears to be forgotten: a young one which was already fledged, having fallen out of the neſt upon the ſole of the window, the parents took no heed of it; but, finding itſelf thus abandoned, it ſtrove to eſcape, flapped its wings, and, after three or four hours exertions, it launched at laſt into the air. I broke off, from another window, a neſt containing four young ones juſt hatched, and ſet it in the ſole of the window; and yet the parents paſſed and repaſſed inceſſantly and fluttered about the ſpot, without regarding the imploring cries of their progeny †: a hen ſparrow would, in ſuch circumſtances, have fed and tended her offſpring a fortnight. It would ſeem, therefore, that the affection of the Martins for their young depends

* When the young are hatched, their excrements are ſaid to be enveloped in a ſort of pellicle; which enables the parents to roll them eaſily out of the neſt. *Friſch.*

† A whole hatch having been put in the ſame cage with the parents, theſe paſſed the night ſometimes on the bar of the cage, ſometimes on the brim of the neſt, almoſt always the one after the other, and at laſt one upon the other, without beſtowing the ſmalleſt attention to their young: but it may be ſaid, that in this caſe the paternal love was ſwallowed up by the regret for the loſs of liberty.

on the local ſituation; however they continue to fetch them proviſions for a long time, and even after they have begun to fly; theſe conſiſt in winged inſects, ſnapped in the air, which is ſo peculiarly their mode of catching *, that if they ſee one ſitting on a wall, they will ſweep paſt it to ſtart the prey.

It has been ſaid that the ſparrows often occupy the Martins' neſts, which is true. It has been added that the Martins thus thruſt out return ſometimes eſcorted by auxiliaries, and, in an inſtant cloſing up the aperture with the uſual mortar, take vengeance on the uſurpers †: whether this ever happened I cannot decide; but the inſtances which have come under my obſervation do not countenance the opinions. The Martins returned frequently in the courſe of the ſummer, quarrelled with the ſparrows, and ſometimes circled about for a day or two, but never attempted to enter the neſt or to ſhut it up. Nor can we ſuppoſe any antipathy to ſubſiſt between theſe birds ‡; the ſparrows will lay wherever they find it convenient.

Though the Martins are ſhyer than the chimney ſwallows, and though philoſophers have

* This is the general opinion, and the moſt conſonant to daily obſervation; yet M. Guys aſſures me that theſe birds ſeek pine-wood, in which they find caterpillars.

† Albertus firſt broached this error; Rzaczynſki repeated it; the Jeſuit Batgowſki aſſerts his being a witneſs of the fact; and Linnæus gives it as a truth aſcertained.

‡ Albertus *apud Geſnerum.*

believed

believed that they were incapable of being tamed *, yet is it very eaſy to ſucceed. They muſt be ſupplied with the proper food, which conſiſts of flies and butterflies †, and muſt receive it often; above all, they muſt be ſoothed into the loſs of liberty, a ſentiment common to all animals, but in none ſo lively or ſo acute as in the winged tribes ‡. A tame Martin § was known to grow extremely fond of its miſtreſs; it ſat whole days upon her knees, and, when ſhe appeared after ſome hours abſence, it uttered joyous accents, clapped its wings, and ſhewed every ſign of lively feeling: it began to feed out of the hand, and its education would probably have com-

* M. Rouſſeau, of Geneva.

† Some authors pretend that they cannot exiſt on vegetable ſubſtances; yet we cannot ſuppoſe that theſe prove a poiſon to them: bread was part of the food of the tame ſwallow which I ſhall preſently mention. But what is more ſingular, children have been ſeen to feed young ſwallows with dung that has dropt from the neſt of another ſwallow of the ſame ſpecies. The brood lived very well for ten days on this diet, and in all probability they would have ſubſiſted longer, had not the experiment been interrupted by a mother, who was fonder of cleanlineſs than of gaining knowledge.

‡ "I have often," ſays M. Rouſſeau, "had the pleaſure of ſeeing them kept in my chamber while the windows were ſhut, and ſo tranquil as to chirp, frolic, and toy at their eaſe, waiting till I ſhould open for them, confident that I would not delay; in fact I roſe, for that purpoſe, every morning at four o'clock."

The voyager Leguat ſpeaks of a tame ſwallow that he had brought from the Canaries to the iſland of Sal; he let it out every morning, and it faithfully returned in the evening. *Voyage aux Indes Orientales, p.* 13. Leguat does not ſay what ſpecies it was. Other perſons have raiſed ſwallows. *See* Volfgang Franzius, *Hiſt. Anim. p.* 456; and the *Journal de Paris for* 1778.

§ In the noble Chapter of Leigneux in Forez.

pletely ſucceeded, had it not eſcaped. It did not fly far; it alighted on a young child, and ſoon fell a prey to a cat. The Viſcount Querhoent aſſures me, that he alſo trained, for ſeveral months, ſome young Martins taken out of the neſt; but he could never bring them to eat by themſelves, and that they always died when he gave over feeding them. When the one I have juſt mentioned attempted to walk, it moved ungracefully, on account of its ſhort legs; and, for this reaſon, the Martins ſeldom alight but upon their neſts, and only in caſes where neceſſity obliges them: for inſtance, when they gather mud for building with, or when they ſpend the night among the reeds towards the end of ſummer, at which time they are become ſo numerous as not to be all contained in their former lodgments*; or, laſtly, when they aſſemble upon the ridges and corners of houſes previous to their migration. Hebert had a houſe in Brie, which was every year their general rendezvous; the number congregated was great, not only on account of their own multiplication, but becauſe many others of their kindred ſpecies, the ſand-martins and chim-

* About the end of ſummer, they are obſerved in the evenings circling in great numbers on the ſurface of water, almoſt till dark: it is probably in order to repair to ſuch ſituations that every day they aſſemble an hour or two before ſun-ſet. Add, that they are much leſs frequent in towns about the evening than during the courſe of the day.

ney

ney ſwallows, joined them: they had a peculiar cry, which ſeemed to call them together. It was remarked that ſhortly before they began their voyage they exerciſed themſelves in ſoaring to the clouds, thus preparing to wing their courſe through the lofty regions *; a fact which agrees with other obſervations related in the preceding article, and which explains why the ſwallows are ſo ſeldom ſeen in the air during their paſſage from one country to another.

The Martins are widely diffuſed through the ancient continent; yet Aldrovandus aſſerts that they are never ſeen in Italy, particularly in the neighbourhood of Bologna. M. Hermann † tells me, that in Alſace they are caught with the ſtares, by ſpreading a net about the cloſe of the evening over a marſh full of ruſhes, and by drowning next morning the birds that are entangled under it. Some of theſe drowned Martins may be reſtored to life, and a ſimple fact of that kind might have given riſe to the fable of their annual immerſion and emerſion.

This ſpecies appears to hold a middle rank between the chimney ſwallow and the black Martin. It has little of the chirping and familiarity of the former; but it builds its neſt ſi-

* Note communicated by M. Lottinger.

† This profeſſor aſſures me that the White-rumps or Martins grow fat in autumn, and are then very good to eat. Franzius ſays nearly as much: yet I publiſh it with regret, as it tends to the deſtruction of an uſeful ſpecies.

milarly,

milarly, and its toes conſiſt of the ſame number of *phalangès*. It has the rough feet of the black Martin, and its hind toe alſo turns forward; like that bird, too, it flies through heavy rains, and then in larger flocks than uſual; it clings alſo to the walls, and ſeldom alights on the ground, and, when it does ſo, it rather creeps than walks. Its bill is wider than that of the chimney-ſwallow, at leaſt apparently ſo, becauſe the mandibles open ſuddenly as high as the ears, and the edges form on each ſide a projection: laſtly, though it is ſomewhat larger, it ſeems rather ſmaller, its feathers, and eſpecially the inferior coverts of its tail, being not ſo fully webbed. The average weight of all that I have weighed was conſtantly from three to four gros.

The rump, the throat, and all the under ſurface of the body, are of a fine white; the ſide of the coverts of the tail is brown; the upper ſurface of the head and neck, the back, thoſe of the feathers and of the primary coverts of the tail, are of a gloſſy black, with blue reflections; the feathers of the head and back cinereous at the baſe, white in the middle; the quills of the wings brown, with greeniſh reflections on the borders; the three laſt of thoſe next the body are terminated with white; the legs clothed as far as the nails with a white down; the bill black, and the legs brown gray; the black of the female is leſs diſtinct, and its white not ſo pure,

pure, even variegated with brown on the rump. In the young ones the head is brown, and there is a ſhade of the ſame colour under the neck: the reflections from the upper ſurface of the body are of a lighter blue, which has a greeniſh caſt in certain poſitions, and, what is remarkable, the quills of the wings are of a deeper tint. They frequently wag their tail upwards and downwards, and the origin of the neck is bare.

Total length five inches and a half; the bill ſix lines; the inſide pale red, at the bottom, blackiſh near the point; the noſtrils round and open; the tongue forked, a little blackiſh near the end; the tarſus five lines and a half, covered with down rather on the ſides than before or behind; the middle toe ſix lines and a half; the ſtar extent ten inches and a half; the tail two inches, forked as far as ſix, ſeven, or even nine lines; in ſome ſubjects this forking reaches only five lines, but in others it does not occur at all.

The inteſtinal tube ſix or ſeven inches; the *cæca* very ſmall, and filled with a matter different from that contained in the true inteſtines; it has a gall bladder; the gizzard is muſcular; the *æſophagus* twenty lines, it dilates into a little glandular bag before its inſertion; the teſticles are of an oval ſhape, and unequal; the greater diameter of the biggeſt ones four or five lines, the ſmaller diameter three; their ſurface was marked with many circumvolutions, like a ſmall

a ſmall veſſel twiſted and rolled in all directions.

What is ſingular, the young Martins are heavier than the adults: five that were taken from the neſt while they were ſcarcely covered with down, weighed together three ounces, which give three hundred and forty-five grains to each; whereas both the parents weighed exactly an ounce, or each was two hundred and eighty-eight grains. The gizzards of the young birds were diſtended with food, and weighed in all one hundred and eighty grains, which was equal to thirty-ſix each; but both the gizzards of the parents, which contained hardly any thing, weighed only eighteen, or they were four times lighter than thoſe of their brood. This fact clearly proves that the parents neglect their requiſite ſubſiſtence in order to ſupply their young, and that, during infancy, the organs concerned in nouriſhment predominate*, as in the adult period thoſe ſubſervient to generation.

Some individuals of this ſpecies have their whole plumage white; and of this I can produce two reſpectable vouchers, Hebert and Hermann. The white Martin of the laſt had red eyes, as is the caſe with ſo many animals whoſe hair or feathers are white; its legs were not covered with down, like the reſt of the ſame hatch.

We may regard the fulvous bellied ſwallow

* I have obſerved the ſame diſproportion both in the gizzards and in the inteſtines of young ſparrows, nightingales, fauvettes, &c.

of

of Barrere as a variety of this ſpecies; and the whitiſh breaſted brown ſparrow of Brown *, as occaſioned by the influence of climate.

* This author calls it a *houſe-ſwallow*, but it is more analogous to the white-rumped ſwallow.

[A] Specific character of the Martin, *Hirundo Urbica:* "Its tail-quills are not ſpotted, its back is bluiſh black, and the whole of its under ſide is white." The reader will find an excellent account of this bird by Mr. White in the Philoſophical Tranſactions for 1774, or in his Natural Hiſtory of Selborne, pp. 157, 162. We ſhall extract the following paſſage, as it further confirms the migration of the ſwallows.

"As the ſummer declines, the congregating flocks increaſe in numbers daily by the conſtant acceſſions of the ſecond broods; till at laſt they ſwarm in myriads upon myriads round the villages on the Thames, darkening the face of the ſky as they frequent the aits of that river, where they rooſt. They retire, the bulk of them I mean, in vaſt flocks together about the beginning of October; but have appeared of late years in a conſiderable flight in this neighbourhood, for one day or two, as late as November the 3d and 6th, after they were ſuppoſed to have been gone for more than a fortnight. They therefore withdraw with us the lateſt of any ſpecies. Unleſs theſe birds are very ſhort lived indeed, or unleſs they do not return to the diſtrict where they have been bred, they muſt undergo vaſt devaſtations ſomehow and ſomewhere; for the birds that return yearly bear no manner of proportion to the birds that retire."

The SAND-MARTIN*.

Hirondelle de Rivage, Buff.
Hirundo Riparia, Linn. Gmel. Kram, Frif. Klein, &c.
Dardanelli, Aldrov.
The *Sand-weſtern* or *Bank-weſtern,* Charleton.
The *Sand-martin, Bank-martin,* or *Shore-bird,* Will.

WE have ſeen that the two preceding ſpecies beſtow much induſtry and labour in conſtructing their little manſion; the two following ſpecies, we ſhall find, breed in holes in the ground, in walls or in trees, and are at little pains to form theſe, ſtrewing coarſely ſome litter.

The Sand-martins arrive in our climates, and retire, nearly at the ſame time with the common martins. Towards the end of Auguſt they gradually come nearer thoſe ſpots where they aſſemble, and about the end of September Hebert tells us that he ſaw a great number of both ſpecies collected together on the houſe which

* Ariſtotle, *Hiſt. Anim.* Lib. I. 1, calls it Δρεπανις, from δρεπανον, a hook; probably becauſe of its forked tail: In Greek, it had alſo the name of Χελιδων Θαλαττια, or ſea-ſwallow.

Pliny terms it *Hirundo Riparia,* Nat. Hiſt. *Lib. XXX.* 4.

In Italian it has the names *Dardanelli, Rondoni, Tartari:* In German, *Rhyn-vogel* (Rhine-bird), *Rhyn-Schwalme* (Rhine-ſwallow), *Waſſer-ſchwalme* (water-ſwallow), *Erd-ſchwalme* (earth-ſwallow), *Ufer Schwalbe* (ſhore-ſwallow): In Daniſh, *Dig-ſvale, Jord-ſvale, Blint-ſvale, Sol-bakke:* In Norwegian, *Sand-ronne, Strand-ſvale, Dig-ſulu, Sand-ſulu:* In Swediſh, *Strand-ſwala, Back-ſwala:* In Poliſh, *Jaſkotka:* In Siberian, *Streſchis.*

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527

he poſſeſſed in Brie*, and particularly on the ſide of the roof that faced the ſouth; and when the flock was formed, it entirely covered the building. But all the Sand-martins do not migrate. The commander Deſmazys writes me that they are always to be found in Malta during the winter, and eſpecially when the weather is inclement†: and, as that ſmall rocky iſland has no lake or pool, we cannot ſuppoſe that in the interval of ſtorms they plunge under water. Hebert has ſeen them as often as fifteen or ſixteen times in the mountains of Bugey‡, in the different winter months: it was near Nantua, in a pretty high ſituation, in a glen of a quarter of a league in length and three or four hundred paces in width; the ſpot was delicious, with a ſouthern aſpect, and ſheltered from the north weſt by vaſt lofty rocks; it was clothed in perpetual

* This houſe was ſituated in the ſkirt of a ſmall town, its principal aſpect was towards a river, and it communicated with the country on ſeveral ſides.

† "In St. Domingo," ſays the Chevalier Lefebvre Deſhayes, "the ſwallows are ſeen to arrive on the approach of a ſtorm; if the clouds diſperſe, they alſo retire, and probably follow the ſhower." They are, in fact, very common in that iſland during the rainy ſeaſon. Ariſtotle aſſerted, two thouſand years ago, that the ſhore-ſwallow appeared not in Greece but when it rained. Laſtly, on all ſeas birds of every kind repair in ſtorms to the iſlands, and ſometimes ſeek ſhelter aboard veſſels, and their appearance is almoſt always the portent of ſome furious guſt.

‡ According to the ſame obſerver, it is much more unuſual to ſee them during winter in the plains. Theſe birds ſeem to be the ſpecies to which Ariſtotle alludes when he ſays, "Many ſwallows are ſeen in the narrow paſſes of mountains." *Lib. VIII.* 16.

verdure, its violets flowered in February, and, in that lovely receſs, winter wore the ſmiles of ſpring. There theſe ſwallows might play, and circle, and catch their inſect food; and if the cold becomes exceſſively ſevere, they could retire into their holes, where the froſt can never penetrate, and where they may find earth-inſects and cryſalids to ſupport them during their ſhort confinement; or perhaps they paſs into a torpid ſtate, to which Gmelin and many others aſſert they are liable, though that they are not always ſo is proved by the experiments of Collinſon *. The country people told Hebert, that they appeared after the ſnows of Advent were melted, if the weather was mild.

Theſe birds are found in every part of Europe: Belon obſerved them in Romagna, where they breed with the king-fiſhers and bee-eaters in the brinks of the Mariſſa, anciently the *Hebrus*. Koenigsfeld found in his travels through the north, that the left bank of a brook which runs beſide the village of Kakui in Siberia, was bored into a great number of holes, which ſerved as retreats to ſmall gray birds called *Streſchis*, which muſt be Sand-martins: five or ſix hundred may be ſeen flying confuſedly about theſe holes, entering them or coming out, but conſtantly in

* Klein. *Ordo Avium*, *p.* 202, 204. Philoſ. Tranſ. *Vol. LIII. p.* 101. Gazette Litteraire, *T. V. p.* 364. Magaſin de Stralſund, &c.

motion

motion like flies *. The ſwallows of this ſpecies are very rare in Greece, according to Ariſtotle, but they are pretty common in ſome diſtricts of Italy, Spain, France, England, Holland, and Germany †. They prefer ſteep banks, as affording the ſafeſt lodgment; the margin of ſtagnant water, which abounds moſt with inſects; and a ſandy ſoil ‡, where they can more eaſily form their little excavations, and ſettle themſelves in them. Salerne tells us that on the ſides of the Loire they breed in the quarries, others ſay in grottos; and both accounts may in part be true. The neſt is only a heap of ſtraw and dry graſs, lined with feathers, on which the eggs are dropt ||. Sometimes they make their own holes, and at other times they take poſſeſſion of thoſe of the bee-eaters and king-fiſhers; the entrance of the cavity is eighteen inches in length. It has been alleged, that they can foreſee inundations, and make a timely eſcape §: but the fact is, that they always dig their hole a little above the higheſt mark of the ſtream.

The Sand-martins only hatch once a year,

* Deliſle's travels into Siberia.

† In the banks of the Rhine, of the Loire, of the Saone, &c.

‡ Lottinger and Hebert.

|| Schwenckfeld ſays that this neſt is of a ſpherical form; but this ſeems to be true rather of the holes than of the neſt built in them. "They make no neſts," ſays Pliny. Aldrovandus is of the ſame opinion: Edwards ſays, that thoſe which Collinſon cauſed to be dug out were complete, but he does not ſpecify their form. Laſtly, Belon doubts whether they excavate the holes themſelves.

§ Plin. *Lib. X.* 33.

according to Friſch; they lay five or ſix eggs, ſemi-tranſparent and without ſpots, ſays Klein; the young ones grow very fat, and may be compared for delicacy to the ortolans. The reaſon is, becauſe they are able to procure a rich ſupply of food, ſince, beſides the numerous tribe of winged inſects, they find reptiles and chryſalids in the ground. In ſome countries, as in Valencia in Spain, there is a great conſumption of Sand-martins *; which would induce me, notwithſtanding the aſſertion of Friſch, to ſuppoſe that in thoſe parts they hatch oftener than once a year.

The adults hunt their prey on the ſurface of the water with ſuch activity that we might imagine them to be fighting; they often run upon each other in the purſuit of the ſame flies, and ſtruggle with ſhrill cries † to obtain the plunder: but this conduct ariſes entirely from emulation.

Were we to judge from its manner of breeding, we ſhould conclude, that this bird is the wildeſt of the European ſwallows; yet is it tamer than the black martin, which lives indeed in towns, but never mingles with any kindred ſpecies, whereas the Sand-martin aſſociates with the common martin, and even the chimney ſwallow: this happens particularly about the time of migration, when the utility of uniting is moſt ſenſibly felt. It differs from theſe two

* *See* Willughby. The young birds are however ſubject to wood-lice, which inſinuate under the ſkin, but never to bugs.

† Geſner.

ſpecies

ſpecies in its plumage, in its voice, and, as we have already ſeen, in ſome of its natural habits. It never perches, and it arrives much earlier in the ſpring than the black martin. I know not on what ground Geſner pretends that it clings and hangs by the feet when it ſleeps.

All the upper ſurface is of a mouſe gray; there is a ſort of collar of the ſame colour at the lower part of the neck; all the reſt of the under ſurface is white; the quills of the tail and of the wings are brown; the inferior coverts of the wings, gray; the bill blackiſh, and the legs brown, clothed behind as far as the toes with a down of the ſame colour.

The male is, according to Schwenckfeld, of a darker gray, and there is a yellowiſh tint at the riſe of the throat.

It is the ſmalleſt of the European ſwallows. Total length four inches and nine lines; the bill a little more than five lines; the tail forked; the tarſus five lines; the hind toe the ſhorteſt; the alar extent eleven inches; the tail two inches and a quarter, forked eight lines, and conſiſting of twelve quills; the wings contain eighteen, of which the nine inner ones are equal; they project five lines beyond the tail [A].

[A] Specific character of the Sand-martin, *Hirundo Riparia*: "It is cinereous, its throat and belly white." Theſe birds are not frequent in England. They are much ſmaller than thoſe of their kindred ſpecies, and are mouſe-coloured. They have a peculiar manner of flying; reeling and wavering, with odd jerks: Hence the peaſants in Spain term them *Papiliones de Montagna*, or Mountain-butterflies.

The CRAG-SWALLOW.

L'Hirondelle Griſe de Rochers *, Buff.
Hirundo Montana. Gmel †.

THESE Swallows conſtantly neſtle in the rocks, and never deſcend into the plains, but in purſuit of their prey. It commonly rains in a day or two after their appearance; becauſe, no doubt, the ſtate of the air then drives the inſects from the mountains. The Crag-ſwallows aſſociate with the common martins, but are not ſo numerous. Both ſpecies are often ſeen in the morning, wheeling about the caſtle of Epine in Savoy; the Crag-ſwallows appear the firſt, and are alſo the firſt to retire to the heights; after half paſt nine o'clock none is found in the vale.

The Crag-ſwallow arrives in Savoy about the middle of April, and departs by the fifteenth of Auguſt; but ſome loiter till the tenth of October. The ſame may be ſaid of thoſe which inhabit the mountains of Auvergne and of Dauphiny.

This ſpecies ſeems to be intermediate to the common martin, whoſe cry and geſtures it has, and the ſand-martin, which it reſembles in its

* i. e. The Gray Rock-ſwallow.

† My information with reſpect to this ſpecies was received from the Marquis de Piolenc, who ſent me two birds.

colours;

colours: all the feathers on the upper ſurface of the head and body, the quills and coverts of the tail, the quills and ſuperior coverts of the wings, are of a dun gray, edged with rufous; the middle pair of the tail is lighter; the four lateral pairs, included between this middle and the outermoſt one, are marked on the inſide with a white ſpot, which is not viſible unleſs the tail be ſpread; the under ſurface of the body is rufous; the flanks rufous, tinged with brown; the inferior coverts of the wings brown; the legs clothed with a gray down, variegated with brown; the bill and nails black.

Total length five inches ten lines; the alar extent ten inches and two-thirds; the tail twenty-one lines, a little forked, conſiſting of twelve quills, and exceeding the wings ſeven lines.

The only thing which appeared to me worth noticing in its internal ſtructure is, that inſtead of a *cæcum* there was a ſingle *appendix* of a line in diameter, and a line and a quarter in length. I have obſerved the ſame in the night-heron.

The SWIFT*.

Le Martinet Noir †, Buff.
Hirundo-Apus, Linn. Gmel. &c.
The *Houſe-martin*, Charleton.
The *Black-martin*, or *Swift*, Will. and Penn.

THE Swifts are real ſwallows, and poſſeſs the characteriſtic qualities even in a higher degree: their neck, their bill, and their legs are ſhorter; their head and throat larger; their wings longer; their flight more lofty and rapid ‡. They are continually on the wing, and when they happen to fall by accident, they can hardly riſe if the ground be flat; they muſt clamber up ſome clod or ſtone, that they may have room to wield their long pinions §, and

* Ariſtotle, *Hiſt. Anim.* Lib. I. 1. applies to it the general name of Απες, or footleſs, meaning only that its feet are ſhort and ſeldom uſed: It was alſo called Κυψελος, from κυψελη, a bee's cell, on account of its mode of neſtling; for which reaſon it had likewiſe the appellation of Περιστερεχελιδων, or rock ſwallow. The two firſt names have been adopted by Pliny, *Apodes*, *Cypſelus*: In Arabic, *Abeſſe*: In Spaniſh, *Vencejo*, *A exaquo*: In German, *Geyr-Schwalb* (vulture-ſwallow): In Daniſh, *Steen*, *Soe*, *Kirke Muur-Svale*: In Norwegian, *Fiag-Svale*, *Swart-Sulu*, *Field-Sulu*: In Swediſh, *Ring-Swala*: In Dutch, *Steen-Swalemen*.

† i. e. The Black-martin.

‡ Ariſtotle ſays, that the Swifts may be diſtinguiſhed from the ſwallows by their rough feet: he was therefore unacquainted with the ſingular diſpoſition of their feet and toes, and with their habits and economy, ſtill more ſingular.

§ A fowler aſſured me that they ſometimes alight on heaps of horſe-dung, where they find inſects, and can eaſily take wing.

commence their motion. This is owing to their ſtructure; for the tarſus is ſo ſhort, that they ſit almoſt on their belly *, and totter from ſide to ſide †. The Swifts have only two modes of life, that of violent exertion, or that of perfect inaction; they muſt either ſhoot through the air, or remain ſquat in their holes. The only intermediate ſtate which they know, is that of clambering up walls and trunks of trees quite near their lodgment, and, by means of their bill, dragging themſelves into the cavity. Commonly they enter it full ſpeed, after having paſſed it and repaſſed it above an hundred times; they dart in in an inſtant, and with ſuch celerity that we totally loſe ſight of them.

Theſe birds are very ſocial with each other, but never mingle with the other kinds of ſwallows; and we ſhall find, in the ſequel, that their diſpoſitions and inſtincts are different. It has been ſaid that they have little ſagacity; yet they can breed in our houſes without depending on our indulgence, and without regarding our controul. Their lodgment is a hole in the wall,

* Belon.

† Two of theſe birds obſerved by M. Hebert, when ſet on a table or on the pavement, had only this motion: their feathers ſwelled if a perſon approached his hand; a young one found at the foot of a wall in which was the neſt, had already this habit of briſtling up its feathers, which were not yet half grown. I have lately ſeen two that took their flight, the one from the pavement, and the other from a gravel walk: they did not walk at all, and never changed their place but by flapping their wings.

which widens into a larger cavity, and is preferred in proportion to its height from the ground, as affording the ſafeſt retreat. They neſtle even in belfries and the talleſt towers, ſometimes under the arches of bridges, where, though the elevation is not ſo great, they are better concealed. Sometimes they ſettle in hollow trees, or in ſteep banks beſide the king-fiſhers, the bee-eaters, and ſand-martins. After they have once occupied a hole, they return every year to it*, and eaſily diſtinguiſh it, though hardly perceptible. It is ſuſpected, with much probability, that they ſometimes take poſſeſſion of the ſparrows' neſts, and when, on their return, they find the property reclaimed, they, with little ceremony, expel the owners.

The Swifts are, of all the birds of paſſage, thoſe which arrive the lateſt in our climates and retire the earlieſt: in general they begin to appear about the end of April, or the beginning of May, and they leave us before the end of July †. Their progreſs is more regular than

* I know a church-porch and a belfry of which the Swifts have kept poſſeſſion for time immemorial; M. Hebert, to whom I owe many good obſervations on this ſpecies, ſees from his windows a hole of the wall above a high cope, to which they have regularly returned for thirteen years: the parents ſeem to tranſmit their manſion to their offspring.

† I am aſſured, that on the lake of Geneva they arrive not till May, and retire about the end of July or the beginning of Auguſt; and when the weather is fine and warm, as early as the fifteenth of July.

that of the other ſwallows, and appears to be more affected by the variations of temperature. They are ſometimes ſeen in Burgundy as early as the twentieth of April, but theſe flocks puſh farther; the ſettlers ſeldom return to occupy their neſt before the firſt days of May *. They are noiſy on their appearance; rarely do two enter at once the ſame hole, and never without fluttering much about its mouth; ſtill more uncommon it is for a third to follow them, nor does it ever ſettle.

I have in different times, and in different places, opened ten or twelve ſwifts' neſts: in all of them I found the ſame materials, and theſe conſiſting of a great variety of ſubſtances; ſtalks of corn, dry graſs, moſs, hemp, bits of cord, threads of ſilk and linen, the tip of an ermine's tail, ſmall ſhreds of gauze, of muſlin, and other light ſtuffs, the feathers of domeſtic birds, thoſe of the partridge, and of the parrot, charcoal, in ſhort, whatever they can find in the ſweepings of towns. But how can birds which never alight on the ground gather theſe materials? A celebrated obſerver ſuppoſes that they raiſe

* This year, 1779, though the ſpring was uncommonly fine, they appeared not in the diſtrict where I live till the firſt of May, and returned before the ninth to the holes from which I had cauſed their neſts to be taken. At Dijon, they were ſeen on the nineteenth of April, but thoſe *domiciliated* did not take poſſeſſion of their holes till between the firſt and fourth of May.

them

them by glancing along the ſurface of the ground, as they drink by ſkimming cloſe on the water. Friſch imagines that they catch the ſubſtances in the air as they are carried up by the wind. But it is evident that little could be collected in the latter way, and, if the former were true, it would not fail to have been obſerved in towns. I am inclined to think the account more probable which ſeveral plain people have told me; that they have often ſeen the Swifts coming out of ſwallows or ſparrows' neſts, and carrying materials in their claws. This obſervation is corroborated by ſeveral circumſtances; firſt, the Swifts' neſts conſiſt of nearly the ſame ſubſtances with thoſe of ſparrows; ſecondly, we know that the Swifts enter ſometimes into the neſts of ſmall birds to ſuck their eggs, which we may ſuppoſe they do for the ſake of pillaging the materials. With regard to the moſs which they employ, it is in very ſmall quantity, and they may gather it with their little claws, which are very ſtrong, from trees, on which they can clamber, and ſometimes even they breed in their hollow trunks.

Of ſeven neſts found under the head of a church porch fifteen feet from the ground, there were only three which had a regular cup-ſhape, and of which the materials were more or leſs interwoven, and with greater order than uſual in ſparrows' neſts; they had alſo more moſs, and

and fewer feathers, and were in general leſs bulky *.

Soon after the Swifts have taken poſſeſſion of the nefts, ſome plaintive cries iſſue continually from it for ſeveral days, and ſometimes during the night: at certain times, two voices may be diſtinguiſhed. Is it the expreſſion of pleaſure common both to the male and female? or is it the love ſong by which the female invites the male to accompliſh the views of nature? The latter ſeems to be the moſt probable conjecture, eſpecially as the ardent cry of the male, when he purſues the female through the air, is ſofter and leſs drawling. We are uncertain whether the female admits one or ſeveral males: we often ſee three or four Swifts fluttering about the hole, and even ſtretching out their claws to clamber on the wall; but theſe may be ſuch as were hatched the preceding year, which ſtill remember the place of their nativity. It is the more difficult to anſwer theſe queſtions, ſince the females have nearly the ſame plumage with the males, and ſince we can ſeldom have an opportunity of viewing their manœuvres.

Theſe birds, during their ſhort ſtay in our climates, have time only to make a ſingle hatch;

* The beſt formed of all weighed two ounces and one gros and a half, the ſeven together thirteen ounces and a half, and the largeſt five or ſix times more than the ſmalleſt: ſome of them had a coat of dung, which could ſcarcely be otherwiſe, conſidering the ſituation of theſe neſts, in holes of various depths.

this

this conſiſts of five white eggs, pointed, and of a ſpindle ſhape: I have ſeen ſome not yet hatched on the twenty-eighth of May. When the young ones have pierced through the ſhell, very different from thoſe of the other ſwallows, they are almoſt ſilent, and crave no food: happily the parents obey the voice of nature, and ſupply them with what is proper. They carry proviſion only twice or thrice a-day; but each time that they return to the neſt they bring ample ſtore, their wide throat being filled with flies, butterflies, and beetles *. They alſo eat ſpiders which they find near their holes; yet their bill is ſo weak that it cannot even bruiſe or hold that feeble prey.

About the middle of June the young Swifts begin to fly, and ſhortly abandon their neſts, after which the parents ſeem no more to regard them. At every period of their lives they are ſubject to vermin, but which appear little to incommode them.

This bird, like all the reſt of the kind, is excellent for the table when fat; the young ones, eſpecially thoſe taken out of the neſt, are reckoned, in Savoy and Piedmont, delicate morſels. The adults are difficult to ſhoot, becauſe they fly both high and rapidly; but as,

* The only Swift that M. Hebert could kill, had a quantity of winged inſects in its throat. This bird catches theſe, according to Friſch, by darting impetuouſly above them, with its bill wide ſtretched.

on account of this very rapidity, they cannot readily alter their courſe, they may, from this circumſtance, be hit not only by a fowling-piece, but alſo by the ſtroke of a ſwitch. The only attention required, is to place one's ſelf in their way by mounting to a belfry, a baſtion, &c. and to meet them with the blow as they dart directly on, or as they come out of their hole *. In the iſland of Zant the boys catch them with a hook and line; they place themſelves in the windows of ſome high tower, and uſe a feather for bait, which theſe birds try to ſnatch and carry to their neſt †. A ſingle perſon can catch in this way five or ſix dozen in a day ‡. Many of them appear at the ſea-ports, and, as a perſon can there more eaſily chooſe his ſtation, he is ſure of killing ſome.

The Swifts avoid heat, and, for this reaſon, they paſs the middle of the day in their neſts in the crevices of walls or rocks and in the loweſt row of tiles of tall buildings. In the morning and evening they go in queſt of proviſion, or flutter without any particular object, but for exerciſe. They return at ten o'clock in the forenoon when the ſun ſhines, and again at half

* Many are killed in this way in the little town which I inhabit, eſpecially thoſe which breed under the church-porch that I have mentioned.

† Perhaps alſo they miſtake the feather for an inſect; they have an acute ſight, but the rapidity of their motion muſt render objects leſs diſtinguiſhable.

‡ Belon.

an

an hour after it ſets in the evening. They rove in numerous flocks, deſcribing an endleſs ſeries of circles upon circles, ſometimes in cloſe ranks purſuing the direction of a ſtreet, and ſometimes whirling round a large edifice all ſcreaming together, and with their whole might; often they glide along without ſtirring their wings, and, on a ſudden, they flap with frequent and haſty ſtrokes. We behold their motions, but we cannot judge of their intentions.

A commotion may be perceived among theſe birds as early as the firſt of July, which announces their departure; their numbers increaſe conſiderably, and, in the ſultry evenings between the tenth and twentieth, their large aſſemblies are held. At Dijon, they conſtantly gather round the ſame belfries*; and, though theſe meetings are numerous, the Swifts appear as frequent as uſual about the other edifices: they are probably foreign birds, therefore on their paſſage to more ſouthern climates. After ſun-ſet they divide into ſmall bodies, ſoar into the air with loud ſcreams, and fly quite differently from ordinary. They may be heard long after they are gone out of ſight, and they ſeem to bend their courſe to the country; they no doubt retire at night to the woods, for there it is known they breed and catch inſects, and that thoſe which haunt the plains during the day,

* Thoſe of St. Philibert and of St. Benigne.

and

and even ſome of thoſe which live in towns, repair to the trees in the evening, where they continue till dark. The city Swifts aſſemble ſoon after, and all prepare to migrate into colder countries. M. Hebert ſcarce ever ſaw them later than the 27th of July; he ſuppoſes that they travel during the night, and proceed to no great diſtance, and croſs not the ſea. Indeed their averſion to heat is ſuch that they would ſhun the ſcorching air of Senegal *. Many naturaliſts † pretend that they lie torpid in their holes during winter, and even before the end of the dog-days. But, in our climates, they are undoubtedly migratory, and in the neſts which I ſearched, about the middle of April, twelve or fifteen days before their firſt appearance, I could not find a ſingle bird.

Beſides the regular periodical migrations, we ſometimes ſee in autumn numerous flocks, which have by ſome accidents been ſeparated from the main body. Such was the one that appeared to Hebert ſuddenly in Brie about the beginning of November: it circled long round a poplar, and then began to ſcatter, roſe to a great height, and vaniſhed with the cloſe of the day. Hebert ſaw another flock about the end of September in the vicinity of Nantua, where

* What Ariſtotle ſays of his Απυς, which lived in Greece the whole year, would imply that it does not ſo much dread heat. But may not the Απυς be our ſand-martin?

† Klein, Heerkens, Herman, &c.

they

they are not common. In both theſe ſtray-flocks there were many birds that had a cry different from that uſual to the Swifts; whether that their voice alters in winter, that they were young ones, or that they belong to a different branch of the ſame family.

In general, the Swift has no warble, but only a ſhrill whiſtle, which varies little in its inflections, and which is ſcarce ever heard except when on the wing. In its hole it remains ſtill and ſilent, afraid, it would ſeem, of diſcloſing its retreat: love alone rouſes it from lethargy. At other times it is very unlike thoſe prattlers deſcribed by the poet *.

Birds which ſhoot through the air with ſuch rapidity muſt have a quick eye, and, in the preſent caſe, the fact corroborates the general principle advanced in the "Diſcourſe on the Nature of Birds." But every thing has its limits, and I cannot believe that they will deſcry a fly at the diſtance of half a quarter of a league, as Belon aſſerts; that is, at twenty-eight thouſand times the fly's diameter, ſuppoſing that nine lines, or nine times farther than a man could ſee. The Swifts are not only ſpread through

* "Nigra velut magnas domini cum divitis ædes
"Pervolat, et pennis alta atria luſtrat hirundo,
"Pabula parva legens, nidiſque loquacibus eſcas.
"Et nunc porticibus vacuis, nunc humida circum
"Stagna ſonat." Virg. *Æneid. XII.* 473.

Virgil ſeems to refer, in this paſſage, to the houſe-ſwallow.

all

all Europe; the Viſcount Querhoent ſaw them at the Cape of Good Hope, and I doubt not that they may be found alſo in Aſia, and even in the new continent.

A moment's reflection will exhibit the ſingularity of this bird: its life is divided between the extremes of motion and reſt; it never receives the impreſſions of touch, but during its ſhort ſtay in its hole; its joys are either exquiſite or totally ſuſpended, nor can it have any idea of that languor which other beings feel from the dull continuance of even pleaſurable ſenſations; and, laſtly, its character is a compound of temerity and ſuſpicion. It creeps by ſtealth into its hole like a reptile, and obſerves profound ſilence; but when it circles in its proper element, it feels its ſuperiority, and, truſting to its powers, it overlooks or deſpiſes danger.

The Swift is larger than our other ſwallows, and weighs ten or twelve gros; the eye is hollow, the throat aſh-white, the reſt of the plumage blackiſh, with green reflections; the back and the inferior coverts of the tail are of a deeper caſt; theſe coverts reach to the end of the two middle quills; the bill is black; the legs of a brown fleſh colour; the fore part and the inſide of the *tarſus* are covered with ſmall blackiſh feathers.

Total length ſeven inches and three quarters; the bill eight or nine lines; the tongue three

lines and a half, forked; the noſtrils like a long ſhaped human ear, the convexity being turned inwards, and their axis being inclined to the ridge of the upper; the two eye-lids naked, moveable, and ſhut near the middle of the ball of the eye; the tarſus is near five lines, the four toes turned forward *, and conſiſting each of two *phalanges* only (a ſingular conformation, peculiar to the Swifts); the alar extent about fourteen inches; the tail near three inches, compoſed of twelve unequal quills †, and forked more than an inch; it is exceeded eight or ten lines by the wings, which contain eighteen quills, that when cloſed reſemble the blade of a ſcythe.

Œſophagus two inches and a half, and forms near its bottom a ſmall glandulous bag; the gizzard is muſcular in its circumference, lined with a wrinkled looſe membrane, and contains portions of inſects, but no pebbles; it has a gall bladder, no *cæcum*; the inteſtinal tube from the gizzard to the anus ſeven inches and a half; the *ovarium* cluſtered with eggs of unequal ſizes (this was on the 20th of May).

Having lately compared ſeveral Swifts of both ſexes, I found that the males weighed more than the females, that their feet were ſtronger,

* How can the genus in which it is ranged be deſcribed to have three toes before and one behind?

† I know that Willughby reckons only ten; but perhaps he confounded this ſpecies with the following.

that

that the white ſpot on the throat is broader, and that almoſt all the white feathers which form it have black ſhafts.

The inſect which infeſts theſe birds is a kind of louſe, of an oblong ſhape, and orange colour, but of different tints; having two thread-like *antennæ*, its head flat and almoſt triangular, and its body conſiſting of nine rings, beſet with a few ſtraggling hairs.

It is ſomewhat remarkable that during their ſtay with us their plumage loſes its black gloſs, and bleaches by continual expoſure to the ſun and the air. They arrive about the end of April, and retire before the end of Auguſt.

[A] Specific character of the Swift, *Hirundo-Apus*: "It is blackiſh, its throat white, all its four toes placed before." Mr. White avers from many years' obſervation, that the Swifts even copulate on the wing. In England they fly each day, in mid ſummer, at leaſt ſixteen hours. Nor do they ſeem to be at all incommoded by the heat of our meridian ſun; nay, they are never ſo lively as in ſultry thundery weather: ſo different is our climate to that of the ſouth of France, where they are confined to their holes for ſome hours at noon.

The WHITE-BELLIED SWIFT.

Le Grand Martinet a Ventre Blanc *, Buff.
Hirundo-Melba, Linn. and Gmel.
Hirundo Major Hiſpanica, Briſſ.
Hirundo Maxima Freti Herculei, Klein.
The *Greateſt Martin* or *Swift*, Edw.

I FIND, in this bird, both the general qualities of the ſwallow, and the peculiar characters of the Swift. Its legs are extremely ſhort; its four toes are turned forward, and conſiſt only of two *phalanges*; it never alights on the ground, and never perches on trees:—in theſe properties it agrees with the Swift: but there are conſiderable diſparities that ſeparate it; for, beſides the differences in the plumage, it is twice as large, its wings are longer, and there are only ten quills in the tail.

Theſe birds delight in mountains, and breed in the holes of crags. They appear annually among the cliffs which border the Rhone in Savoy, in thoſe of the iſland of Malta, in the Swiſs Alps, &c. The one deſcribed by Edwards was killed on the rocks of Gibraltar; but it is uncertain whether it reſides there, or was only on its paſſage. And though it were a ſettler, this would not be a ſufficient reaſon to call it *Spaniſh Swallow*, as Briſſon has done: for, 1. it is found in many other countries, and probably

* *i. e.* The Great White-bellied Martin.

in

in all thoſe which abound with mountains and rocks. 2. It is rather a Swift than a ſwallow. One was killed, in 1775, in our diſtricts on a pool, at the foot of a high mountain.

The Marquis de Piolenc (to whom I am indebted for my acquaintance with theſe birds, and who has ſent me ſeveral) writes me that they arrive in Savoy about the beginning of April, and that they fly at firſt over the pools and marſhes, and in a fortnight or three weeks they reach the high mountains; that they do not fly ſo lofty as the common Swifts, and that the time when they retire is not ſo preciſe or fixed as that of their appearance, and depends much on the ſtate of the weather, and on the warmth or chillneſs of the air*: laſtly, he ſubjoins that they live on beetles, ſpiders, &c. that they are difficult to ſhoot, that the fleſh of the old ones is unpleaſant †, and that the ſpecies is not numerous.

It is probable that theſe White-bellied Swifts breed alſo among the ſteep rocks on the ſea-ſide, and that we may apply to them, as well as to the common Swifts, what Pliny ſays of certain birds without feet that fly in the open ſea at all diſtances from the ſhore, circling round the veſſels. Their cry is nearly the ſame with that of the common Swift.

* In the country of Geneva they remain a ſhorter time than the Swift or black Martin.

† Sportſmen uſually ſay that theſe birds are hard both to kill and to eat.

The whole of the upper ſurface is brown-gray, but deeper on the tail and wings, with reddiſh and greeniſh reflections; the throat, the breaſt, and the belly, white; on the neck there is a brown-gray collar, variegated with blackiſh; the ſides are variegated alſo with blackiſh and with white; the lower belly and the inferior coverts of the tail are of the ſame brown with the back; the bill black; the legs fleſh coloured, covered with down before and on the inſide; the ground of the feathers brown beneath the body, and light gray above; almoſt all the white feathers have a black ſhaft, and the brown ones are edged delicately with whitiſh at the tip. In one male which I obſerved, the feathers on the head were deeper coloured than in two others with which I compared it: it weighed two ounces five gros.

Total length eight inches; the bill an inch, ſlightly hooked; the tongue four lines, of a triangular ſhape; the iris brown; the eye-lids naked; the tarſus five lines and a half; the nails ſtrong, the inner one the ſhorteſt; the alar extent above twenty inches; the wings compoſed of eighteen quills; the tail three inches and a half, conſiſting of ten unequal quills, forked eight or nine lines, and exceeded by the lines two inches at leaſt.

The gizzard ſlightly muſcular, very thick, lined with a looſe membrane, containing fragments of inſects, and ſome whole ones, and

among others was one whoſe ſkinny wings reached more than two inches; the inteſtinal tube nine or ten inches; the *æſophagus* dilating below into a glandulous bag; no *cæcum*, nor could I perceive any gall bladder; the teſticles very long and ſmall (this was on the 18th of June). It appeared to me that the meſentery was ſtronger, the ſkin thicker, the muſcles more elaſtic, and the brain firmer, than in other birds: every thing denoted ſtrength, and indeed the ſwiftneſs of its motion neceſſarily implies that.

We may remark that the ſubject deſcribed by Edwards was ſmaller than ours. He aſſerts that it reſembles the ſand-martin ſo exactly that the ſame deſcription will ſerve both. It is true that their plumage is nearly alike, and that all the ſwallow tribe are ſimilar; but that naturaliſt ſhould have noticed that the toes are differently diſpoſed.

[A] Specific character of the White-bellied Swift, *Hirundo-Melba*: "It is brown; its throat and belly white; all its toes placed before."

FOREIGN BIRDS,

WHICH ARE RELATED TO THE SWALLOWS, THE MARTINS, AND THE SWIFTS.

THOUGH the Swallows of the two continents form only one tribe, and are analogous in their ſhape and principal properties *, they have not all the ſame inſtincts and natural habits. In Europe, and on the neareſt borders of Africa and of Aſia, they are almoſt wholly birds of paſſage. At the Cape of Good Hope a part only migrate, and the reſt are ſtationary. In Guiana, where the temperature is pretty uniform, they remain the whole year, without ſhifting their abodes; nor is the manner of life the ſame in them all; ſome prefer the ſettled and cultivated ſpots; others indifferently frequent inhabited places, or the wildeſt ſolitude; ſome inhabit the uplands, others the fens; ſome appear to be attached to particular diſtricts; but none of them build their neſt with earth like ours, though ſome breed in hollow trees, like the Swifts, and others in banks, like the Sand-martins.

It is remarkable, that almoſt all the late obſervers agree, that in this part of America and

* Perhaps we ſhould except the bill, which is ſtronger in ſome American Swallows.

in the adjacent iſlands, ſuch as Cayenne, St. Domingo, &c. the ſpecies of Swallows are more numerous and various than in Europe, and that they reſide there the whole year; while, on the contrary, Father Dutertre, who travelled through the Caribbees when the colonies were juſt planted, aſſures us that Swallows are very rare in theſe iſlands, and that they are migratory as in Europe *. If both theſe obſervations be regarded as well aſcertained, they will ſhew the influence of civilized man on nature, ſince his preſence is alone ſufficient to invite whole ſpecies to ſettle and multiply. There is a curious remark made by Hagſtroem in his *Swediſh Lapland*, that corroborates this remark: he relates that many birds and other animals, whether from a predilection to human ſociety or from views of intereſt, gather near the new ſettlements; he excepts, however, the geeſe and ducks, who obſerve a different conduct, and, both in the mountains and in the vallies, lead their migrations in a direction oppoſite to thoſe of the Laplanders.

I ſhall conclude by remarking with Bajon and many other obſervers, that, in the iſlands and continent of America, there is often a great difference between the plumage of the male and female of the ſame ſpecies, and often a ſtill greater in the

* "During the ſeven or eight years that I lived there, I never ſaw more than a dozen: they appear not (he ſubjoins) except in the five or ſix months that they are ſeen in France."

ſame

ſame individual at different ages. And this fact will juſtify the liberty which I ſhall take in ranging them.

I.

The BLACK SWALLOW.

Le Petit Martinet Noir *, Buff.
Hirundo Nigra, Gmel.
Hirundo Dominicenſis, Briſſ.

THIS bird, which inhabits St. Domingo, is ſomewhat differently ſhaped from the Swift: the bill is rather ſhorter; the legs rather longer; ſo is the tail, and alſo leſs forked; the wings much longer; laſtly, the feet do not ſeem in the figure to have their four toes turned forward, nor does Briſſon tell how many *phalanges* the toes have.

This doubtleſs is the ſame with the ſpecies deſcribed by Bajon as almoſt quite black, which frequents the dry ſavannas, and breeds in holes in the ground, and perches often on withered trees. It is ſmaller than the Swift, and of a more uniform blackiſh, moſt of the individuals not having a ſingle ſpot of any other colour in their whole plumage.

Total length five inches and ten lines; the

* *i. e.* The Little Black *Martinet* (Swift).

bill

bill ſix lines; the tarſus five lines; the alar extent fifteen inches and a half; the tail two inches and a half, forked ſix lines, and exceeded by the wings fourteen lines, and in ſome eighteen lines. In one ſpecimen there was a ſmall very narrow white bar on the front. I ſaw another in Mauduit's excellent cabinet, that had been brought from Louiſiana; it was of the ſame ſize and nearly of the ſame plumage, being of a blackiſh gray without any gloſs, and its legs not clothed with feathers [A].

II.

The WHITE-BELLIED SWIFT *.

Le Grand Martinet Noir à Ventre Blanc, Buff.
Hirundo Dominicenſis, Gmel.
Hirundo cantu Alaudam referens, Klein.
The *St. Domingo Swallow*, Lath.

I CONCEIVE this bird to be a Swift from the account given by Father Feuillée, who ſaw it in St. Domingo. He calls it indeed a *Swallow*, but then he compares it to the Swifts, with regard to ſize, ſhape, and even colours. He ſaw it in the month of May ſitting on a rock,

* i. e. The White-bellied great black *Martinet* (Swift).

[A] Specific character of the *Hirundo Nigra:* "It is entirely black."

and

and took its ſong for that of a lark, till the opening dawn enabled him to diſtinguiſh it. He aſſures us that numbers of theſe birds are ſeen in the American iſlands in the months of May, June, and July.

The predominant colour of the plumage is fine black, with the gloſs of burniſhed ſteel; it ſpreads not only on the head, and all the upper ſide of the body, including the ſuperior coverts of the tail, but alſo on the throat, the neck, the breaſt, the flanks, the thighs, the ſmall coverts of the wings; the quills, the great ſuperior and inferior coverts of the wings, and the quills of the tail, are blackiſh; the inferior coverts of the tail and of the belly are white; the bill and legs brown.

Total length ſeven inches; the bill eight lines; the tarſus ſix; the alar extent fourteen inches and two lines; the tail two inches and three quarters, forked nine lines, compoſed of twelve quills; it does not project beyond the wings.

Commerſon brought from America three birds much like the one deſcribed by Briſſon, and which ſeem to belong to the ſame ſpecies [A].

[A] Specific character of the *Hirundo Dominicenſis:* "It is black, with a ſteel gloſs; its belly white."

III.

The PERUVIAN SWALLOW.

Le Martinet Noir & Blanc à Ceinture Griſe *, Buff.
Hirundo Peruviana, Gmel.
Hirundo Peruviana Major, Briſſ.

THE plumage of this bird conſiſts of three principal colours: black is ſpread over the back, and as far as the ſuperior coverts of the tail incluſively; ſnowy white on the under ſide of the body; light cinereous on the head, the throat, the neck, the ſuperior coverts of the wings, their quills, and thoſe of the tail: all theſe quills are edged with yellowiſh gray, and on the belly there is a light aſh-coloured girdle.

This bird is found in Peru, where it was deſcribed by Father Feuillée. Like all the Swifts, it has ſhort legs; the bill ſhort and broad at its baſe; the nails hooked and ſtrong, black like the bill; and the tail forked.

* i. e. The black and white Swift with a gray girdle.

IV.

The WHITE-COLLARED SWIFT.

Le Martinet a Collier Blanc, Baff.
Hirundo Cayanenſis, Gmel.

THIS is a new ſpecies which we received from the iſland of Cayenne. We have ranged it with the Swifts, becauſe it has the four toes turned forward.

The collar which diſtinguiſhes it is of a pure white, and very conſpicuous on the bluiſh black, which is the prevailing colour of its plumage. The part of this collar which paſſes under the neck forms a narrow band, and terminates on each ſide in a large white ſpot, which occupies the throat and all the upper ſide of the neck; from the corners of the bill riſe two ſmall diverging white bands, the one ſtretching above the eye to form an eye-lid, the other paſſes under the eye to ſome diſtance; laſtly, on each ſide of the lower belly there is a white ſpot placed in ſuch a manner, that it appears below and above; the reſt of the upper and under ſides, including the ſmall and middle coverts of the wings, is of a velvet black with violet reflections; what appears of the great coverts of the wings next the body is brown edged with white; the great quills and thoſe of the tail are black; the former bordered interiorly with ruſty brown; the bill and legs

legs black; the feet feathered to the nails. Bajon ſays that this Swift breeds in houſes. I have ſeen its neſt at Mauduit's; it was very large, well ſtuffed, and conſtructed with the cotton of dog's-bane *; it had the ſhape of a truncated cone, of which one of the baſes was five inches in diameter, and the other three inches; its length was nine inches; it appeared to have adhered by its large baſe, compoſed of a ſort of paſteboard made of the ſame ſubſtance: the cavity of this neſt was divided obliquely near its middle by a partition, which extended near the baſe where the eggs were lodged, and near that part there was a ſmall heap of very ſoft dog's bane, which formed a kind of valve, and ſeemed intended to ſcreen the young from the external air. Such precautions, in ſo warm a climate, ſhews that theſe Swifts feel acutely the ſenſation of cold. They are as large as the common Martins.

Total length, being the average of ſeveral ſpecimens, five inches, and from three to eight lines; the bill ſix or ſeven; the tarſus three or five; the hind nail ſlender; the tail from two inches to two inches and two lines, forked eight lines, and exceeds the wings from ſeven to twelve lines.

* *Apocynum Cannabinum*, Linn.

V.

The ASH-BELLIED SWALLOW.

Le Petite Hirondelle Noire a Ventre Cendre *, Buff.
Hirundo Cinerea, Gmel.
Hirundo Peruviana, Briſſ.

THIS Peruvian Swallow, according to Father Feuillée, is much ſmaller than the European Swallows; its tail is forked, its bill very ſhort and almoſt ſtraight; the head and all the upper ſide of the body, including the ſuperior coverts of the wings and tail, are of a ſhining black; all the under ſide of the body cinereous; laſtly, the quills of the wings and of the tail are of a dull aſh-colour, edged with yellowiſh gray [A].

VI.

THE

BLUE-SWALLOW of LOUISIANA. *Buff.*

Hirundo Violacea, Gmel.

THE whole plumage is of a deep blue, yet not uniform, but gloſſed with different tints of violet; the great quills of the wings are

* The Aſh bellied little black Swallow.

[A] Specific character of the *Hirundo Cinerea*: "It is black, below cinereous; the quills of its wings and tail gray; its orbits brown."

alſo

alſo black, though only on the inſide, and not ſeen unleſs the wings are ſpread; the bill and legs are black; the bill a little hooked.

Total length ſix inches and ſix lines; the bill ſeven lines and a half; the tail very forked, and exceeded five lines by the wings, which are very long.

M. Lebeaux has brought from the ſame country another ſpecimen, which is evidently of the ſame kind, though larger, and the quills of the tail and wings, and the primary coverts of the wings, are blackiſh, without any ſteel gloſs.

Total length eight inches and a half; the bill nine lines, pretty ſtrong and ſomewhat hooked; the tail three inches, forked an inch, and falls a little ſhort of the wings [A].

VARIETIES.

THE BLUE SWALLOW of Louiſiana ſeems to be the principal ſtem which has given origin to four varieties, two of which are ſpread through the north, and the other two through the ſouth.

I. The Cayenne Swallow * of the *Planches*

[A] Specific character of the *Hirundo Violacea*: "It is dark blue, tinged with violet; the inſide of its greater wing-quills, its bill, and its legs, are black."

* *Hirundo Chalybea*, Gmel.
Hirundo Cayanenſis, Briſſ.
The *Chalybeate Swallow*, Lath.

Enluminées. It is the moſt common ſpecies in the iſland of Cayenne, where it remains the whole year. It is ſaid to ſit frequently among bruſh wood, and on half-burnt trunks that bear no leaves. It does not build a neſt, but breeds in hollow trees. The upper ſurface of the head and of the body is blackiſh, gloſſed with violet; the wings and the tail the ſame, but edged with a lighter colour: all the under ſurface of the body is ruſty gray veined with brown, and growing more dilute on the lower belly and the inferior coverts of the tail.

Total length ſix inches; the bill nine lines and a half, ſtronger than that of the Swallows'; the tarſus five or ſix lines; the hind toe and nail are the ſhorteſt; the alar extent fourteen inches; the tail two inches and a half; forked ſix or ſeven lines, and exceeded by the wings about three lines.

II. I have ſeen four blue Swallows brought from South America by Commerſon, which were of a middle ſize between thoſe of Cayenne and Louiſiana, and which differed only in the colours of the lower ſurface of the body. In three of them the throat was brown gray, and the under ſide of the body white. The fourth, which came from Buenos Ayres, had its throat and all the under ſide of its body white, ſprinkled with brown ſpots, which are more frequent on the fore parts, and wider ſcattered on the lower belly.

III. The

III. The Carolina bird * which Cateſby calls the *Purple Martin*. It belongs to the ſame climate, and is of the ſame bulk with the one from Buenos Ayres, juſt mentioned. A fine deep purple is ſpread over all its plumage, and ſtill more intenſe on the quills of the tail and of the wings; the bill and legs are rather longer than thoſe of the preceding varieties, and its tail, though ſhort, projects ſomewhat beyond the wings. It neſtles in holes made on purpoſe for it around the houſes, and in gourds which are ſet on poles to invite it. It is eſteemed uſeful becauſe it ſcares away the birds of prey, and the ravenous beaſts, or rather gives notice of their appearance. It leaves Virginia and Carolina on the approach of winter, and returns in the ſpring.

Total length ſeven inches and eight lines; the bill ten lines; the tarſus eight lines; the tail two inches and eight lines, and forked fourteen lines, projecting a little beyond the wings.

IV. The Swallow from Hudſon's Bay, termed by Edwards *The Great American Martin* †. Like

* *Hirundo Purpurea*, Gmel.
The *Purple Swift*, Penn.
The *Purple-Swallow*, Lath.
Specific character: "It is entirely purple, its tail forked."

† *Hirundo-Subis*, Linn. and Gmel.
Hirundo Freti Hudſonis, Briſſ.
The *Canada Swallow*, Lath.
Specific character: "It is bluiſh black; its mouth and its under ſide whitiſh cinereous."

the preceding varieties, it has a ſtronger bill than uſual; the upper ſurface of the head and body is of a ſhining purpliſh black, and there is a little white at the baſe of the bill; the great quills of the wings, and all thoſe of the tail, are black without any gloſs, and edged with lighter colour; the upper edge of the wing whitiſh; the throat and breaſt deep gray; the ſides brown; the under ſurface of the body white, ſhaded with a brown caſt; the bill and legs blackiſh.

Total length near eight inches; the bill eight lines; the edges of the upper mandible ſcalloped near the point; the tarſus ſeven lines; the tail near three inches, forked ſeven or eight lines, and exceeding the wings three lines.

VII.

The BRASILIAN SWALLOW.

La Tapere, Buff.
Hirundo Tapera, Linn. Gmel. Ray, Sloane.
Hirundo Americana, Briſſ. and Klein.
Tapera, Marcgr.

THIS Braſilian Swallow, Marcgrave tells us, reſembles much the European; its ſize the ſame; its manner of circling alſo the ſame; and its legs as ſhort, and feet of a ſimilar ſhape. The upper

upper ſide of the head and body, including the wings and the tail, are brown gray, but the quills of the wings and the extremity of the tail browner than the reſt; the throat and breaſt gray mixed with white; the belly white, and alſo the inferior coverts of the tail; the bill and the eyes are black; the legs brown.

Total length five inches and three quarters; the bill eight lines, and its opening extends beyond the eyes; the tarſus ſix lines; the alar extent twelve inches and a half; the tail two inches and a quarter, compoſed of twelve quills, forked three or four lines, and a little exceeded by the wings.

According to Sloane, this bird belongs to the Swifts, only its plumage is darker. It frequents moſtly the meadows and ſavannas; and is ſaid to perch, from time to time, on the buſhes: and ſince none of our Swallows, Martins, or Swifts, have that habit, I am inclined, notwithſtanding the opinion of Sloane and Oviedo *, to think that the *tapera* is a ſpecies peculiar to America; at leaſt, it is diſtinct from thoſe of Europe.

Edwards ſuſpects it to be the ſame with his *great American Martin*; but on comparing the deſcriptions, I find differences in the plumage, in the ſize, and in the proportions [A].

* Oviedo reckons the *tapera* among the birds that are common to both continents.

[A] Specific character of the *Hirundo-Tapera*: "Its tail-quills are equal; its body blackiſh, and white below."

VIII.

THE
BROWN-COLLARED SWALLOW.

*Hirondelle Brune & Blanche a Ceinture Brune**, Buff.
Hirundo Torquata, Gmel.

In general, all the upper ſurface is brown, and all the under white or whitiſh, except a broad brown girdle on the breaſt and thighs: there is a ſlight exception, however; it is a ſmall white ſpot on each ſide of the head between the bill and the eye. This bird was brought from the Cape of Good Hope.

Total length ſix inches; the bill eight lines, ſtronger than uſual in Swallows, the upper mandible a little hooked, its edges ſcalloped near the point; the tail twenty-ſeven lines and ſquare, and falling eight lines ſhort of the wings, which grow very narrow near the extremities, for the ſpace of about two inches.

* *i. e.* The Brown and White Swallow with a brown cincture.

IX.

The WHITE BELLIED CAYENNE SWALLOW, *Buff.*

Hirundo Leucoptera, Gmel.
The *White-winged Swallow*, Lath.

A SILVERY white ſpreads not only over all the under ſurface of the body, including the inferior coverts of the tail, but alſo on the rump, and it borders the great coverts of the wings; and this edging extends more or leſs in different individuals; the upper ſide of the head, neck, and body, and the ſmall ſuperior coverts of the wings, are cinereous, with reflections which are more or leſs conſpicuous, and fluctuate between green and blue, and of which there are alſo ſome traces on the quills of the wings and of the tail, whoſe ground colour is brown.

This handſome Swallow ſkims along the ground like ours, circles in the overflowed ſavannas of Guiana, and perches on the loweſt branches of leafleſs trees.

Total length from four and a quarter to five inches; the bill ſix or eight lines; the tarſus five or ſix; the hind nail ſtrongeſt after the middle one; the tail an inch and a half, forked two or three lines, and exceeded, from three to ſix lines, by the wings.

We may regard the Spotted-bellied Cayenne

Swallow as a variety of this ſpecies, differing only in its plumage, and the ground colours being ſtill nearly the ſame, always browniſh-gray and white; but the upper ſide of the body, and of the quills of the wings and of the tail, is of an uniform brown, without any reflection or mixture of white; the under ſide, on the contrary, which in the other is of an uniform white, is in this bird white ſprinkled with oval brown ſpots, thicker on the fore part of the neck and of the breaſt, and thinner towards the tail.—In ſome of the White-bellied Swallows there is a mixture of white on the upper coverts of the wings, and the gray or brown of the upper ſurface of the body is leſs gloſſy.

X.

The ESCULENT SWALLOW.

La Salangane, Buff.
Hirundo Eſculenta, Linn. and Gmel.
Apus Martna, Rumphius and Olearius.
Hirundo Riparia Cochinchinenſis, Briſſ.
Hirundo nido eduli. Bontius.
Layong-Layong, Marſd. Sumatra.

SALANGANE is the name which the inhabitants of the Philippines beſtow on a ſmall Sand-martin, celebrated for the ſingular quality of its neſt, which is eaten and eſteemed a great delicacy

delicacy in China, and in many of the other adjacent countries *. The high price which it bears tempts frequently to adulterate it, which, together with the fables that have been propagated on the ſubject, occaſions much obſcurity and contradiction.

Theſe neſts have been compared to thoſe of the *Halcyons*, and many have haſtily concluded that they were the ſame. The ancients conceived the latter to be real birds' neſts, compoſed of ſlime, froth, and other impurities that float on the ſurface of the ſea, and they diſtinguiſhed them into ſeveral kinds. The one mentioned by Ariſtotle was of a ſpherical form, its mouth narrow, of a ruſty colour, and of a ſpongy cellular ſubſtance, conſiſting chiefly of fiſh-bones †. But a ſlight compariſon with the deſcription which Doctor Vitaliano Donati gives of the *Alcyonium* of the Gulf of Venice ‡ will convince

* In China theſe neſts are called *Saroi-Bouras*; in Japan, *Jenwa*, *Joniku*; in India, *Patong*.

† Ariſt. *Hiſt. Anim.* Lib. IX. 14. Plin. *Lib. XXXII.* 8. There are always many of theſe bones and ſcales of fiſhes in the neſt of our halcyon or king-fiſher, but they are thinly ſcattered among the duſt on which this bird lays its eggs, and do not enter into the compoſition of the neſt; for our king-fiſher never builds one.

‡ The *Alcyonium* is a marine body . . . approaches the round or convex figure above . . . its ſurface tuberous . . . completely inveſted with very thick ſpines . . . of an earthy colour, but free from filth, of a wax-colour . . . the heart much ſofter . . . ſpongy and cavernous . . . with many ſpines much entangled and cloathed with fleſh, &c." *Storia Naturale marina dell Adriatico*, p. 58.

us

us that they are exactly the ſame, and only the *nidi* of ſea inſects. The only difference is that Donati ſays its entrance is large, and Ariſtotle that it is ſmall; but theſe terms are evidently vague: the Italian finds the mouth to be one ſixth of the width of the whole.

But the *patong* of the Eaſt-Indies is the real neſt of a ſpecies of Swallow. Writers are not agreed either with regard to its materials, its form, or the places where it is found: ſome aſſert that it is attached to rocks, cloſe on the ſurface of the water*; others, that it is lodged in the hollows of theſe rocks †; and others, that it is concealed in holes made in the ground ‡. And Gemelli Carreri adds, "that the ſailors are always in ſearch along the beach, and when they find earth thrown up, they open the ſpot with a ſtick, and take the eggs and the young, which are reckoned equally delicate §."

With regard to the form of theſe neſts, ſome affirm that they are hemiſpherical ||, while others ſay, "that they have many cells, which are like large conglutinated ſhells, and marked as ſuch with *ſtriæ* and rugoſities ⸸."

* *Curioſites de la Nature & de l'Art*, p. 170.

† John de Laet, Van Neck, Kircher, &c.

‡ Gemelli Carreri, *Voyage round the World*, t. V. p. 268.

§ The ſame thing has been ſaid of our Sand-martin. *Salerne, and Willughby.*

|| *Muſæum Worm.*

⸸ Father Philip Marin. *Hiſt. de la Chine*, p. 42.

Of

Of its ſubſtance, the accounts are ſtill more various. Some aſſert that it is ſtill unknown *; others, that it is the froth of the ſea, or fiſh-ſpawn; others, that it is ſtrongly aromatic; others, that it is inſipid; others, that it is a juice gathered by the *Salanganes* from the tree called *calambouc*; others, that it is compoſed of a viſcous ſubſtance diſcharged from the bill in the love ſeaſon; others, that it is formed of the fiſh-plants found on the ſea: but the greater number agree, that the ſubſtance of theſe neſts is tranſparent and like iſinglaſs, which is the fact. The Chineſe fiſhers aſſured Kæmpfer that thoſe uſually ſold were nothing but a preparation of the marine polypi, and he adds, that by his receipt the colour may be imitated. All theſe diſcordant relations prove that various ſubſtances, natural or artificial †, have at different times, and in different countries, been regarded as the neſts of the *Salangane*. In this ſtate of uncertainty, I could not do better than apply for in-

* Kircher, Du Halde, &c.

† Here is Kæmpfer's recipe: Firſt ſkin the polypes, and ſteep the fleſh in a ſolution of alum for three days; then rub, waſh, and clean it till it become tranſparent, and afterwards pickle it. *Hiſt. du Japan, t. I. p.* 120. In thoſe countries many other preparations are made of the ſame kind; in China, with the tendons of ſtags, and with the fins of ſharks. *See* Olof Toren, *Voy. aux Indes Orient. p.* 76; *Etabliſſ. Europ. dans les Indes, t. I. l.* 2. (N. B. Iſinglaſs is made of the ſwimming bladders of a fiſh common in the Ruſſian ſeas.) In Tonquin fowls' eggs are ſeaſoned in ſuch manner as to preſerve them, and to fit them for ſeaſoning to other diſhes. *Hiſtory of Tonquin*, in Churchill's Collection, *Vol. VI. p.* 6.

formation to that philoſophical traveller, M. Poivre, formerly *Intendant* of the Iſlands of France and Bourbon. That gentleman was ſo obliging as to ſend me the following account.

"In 1741 I embarked in the ſhip Mars, bound for China, and in the month of July, the ſame year, we reached the ſtraits of Sunda, very near Java, and between two ſmall iſlets, called the *Great and Little Tocque*. We were there becalmed, and went aſhore on Little Tocque to hunt green pigeons. While the reſt of the party were clambering among the precipices, I walked along the beach to gather ſhells and jointed corals, which are found here in great abundance. After having made almoſt an entire circuit of the iſlet, it was growing late, when a ſailor who accompanied me, diſcovering a deep cavern in the rocks on the brink of the ſea, went into it, and ſcarce advanced two or three ſteps when he called aloud to me. I haſtened to the mouth of the cavern, and found it darkened by an immenſe cloud of ſmall birds, which poured out like ſwarms. I entered it, and knocked down with my cane many of theſe poor little birds, with which I was then unacquainted; as I penetrated farther, I perceived the roof of the cavern to be covered entirely with ſmall neſts ſhaped like holy-water-pots*. The ſailor

* Each of theſe neſts contained two or three eggs or young ones, which lay ſoftly on feathers, like thoſe which the parents had on their

ſailor had already broken off ſeveral, and had filled his frock with them and with birds. I alſo detached ſome of the neſts, and found them glued firmly to the rock. Night now came on, and we returned to the ſhip with the fruits of our excurſion.

"The neſts which we brought were known by many of our people on board, who had made ſeveral voyages to China, to be the ſame with thoſe ſo highly valued in that country. The ſailor kept ſeveral pounds, which he ſold to good account at Canton. For my part, I delineated and coloured theſe birds with their neſts and their young; and I diſcovered them to be real Swallows: they were about the ſize of the larger kind of humming-birds *(colibris)*.

"Since that time I have obſerved, in ſeveral voyages, that, in the months of March and April, the ſeas which extend from Java to Cochin-China, and from the promontory of Sumatra to New Guinea, are covered with fiſh-ſpawn, which floats on the water like ſtrong glue half-melted. I have learnt from the Malays, the Cochin-Chineſe, and from the natives of the Philippines and Moluccas, that this is the ſubſtance of which the *Salangane* conſtructs its neſt *. They all agree in this

their breaſt. As theſe neſts ſoften in water, they could not withſtand rain, or bear an expoſure near the ſurface of the ſea.

* It gathers the ſpawn either by razing the ſurface of the ſea, or

this account. On paſſing the Moluccas in April and the ſtraits of Sunda in March, I fiſhed up ſome of this ſpawn with a bucket, and after having drained off the water and dried it, I found it reſembled exactly the ſubſtance of thoſe neſts.

" About the end of July and the beginning of Auguſt, it is cuſtomary with the people of Cochin-China to rove the iſlets, which ſkirt their coaſt to the diſtance of twenty leagues, in ſearch of the neſts of theſe little Swallows . . .

" The Salanganes are ſeldom ever found, but in that immenſe Archipelago which encircles the eaſtern extremity of Aſia . . . . All that Archipelago, where the iſlets may be ſaid almoſt to touch each other, is extremely favourable to the breeding of fiſh; their ſpawn is very abundant; the water is there warmer than in the ocean."

I have obſerved ſeveral of theſe neſts; they reſembled the half of an oblong hollow ellipſoid, made by cutting it at right angles through the middle of the larger axis; and the plane of this ſection had ſtuck to the rock: they conſiſted of a yellowiſh white ſubſtance, ſemi-tranſparent; compoſed externally of exceeding thin and nearly concentric layers; the inſide was formed of irregular net-work, the meſhes very unequal,

or by alighting on the rocks on which it is caſt and coagulated. Sometimes threads of this viſcous ſubſtance are ſeen hanging at the bills of theſe birds, and which have been ſuppoſed, but without foundation, to be extracted from their ſtomach in the love-ſeaſon.

and

and placed one above another, the threads being drawn from the ſame ſubſtance with the outer layers, and much interwoven.

In the neſts which were entire, no feather could be perceived; but on cutting carefully into their ſubſtance, we found ſome entangled, which diminiſhed the tranſparency of the part. Sometimes, though much more rarely, we diſcovered fragments of egg-ſhells; and almoſt all of them had veſtiges of the birds' excrements *.

I held in my mouth, a whole hour, a ſcale detached from one of theſe neſts; it had at firſt a ſlight ſaline flavour, afterwards it was inſipid as paſte; it did not diſſolve, but ſoftened and ſwelled. M. Poivre alſo found it had only the taſte of iſinglaſs, and he aſſures us that the Chineſe value it ſolely for its nutritious invigorating quality; he adds, that he never ate any thing ſo rich and ſtrengthening as the ſoup made with it and meat †. If the *Salanganes* feed on the ſame ſubſtance with which they build their neſt, and which is ſo plentiful in thoſe ſeas, and if it has the prolific property, which the Chineſe aſcribe to it, no wonder that the ſpecies is very numerous. It is ſaid that a thou-

* Moſt of theſe obſervations were firſt made by Daubenton the younger, who communicated them to me with ſeveral neſts of Salanganes, where I obſerved the ſame things.

† Might not this ſoup owe part of its qualities to the fleſh uſed in making it?

ſand

ſand caſks of theſe neſts are annually exported from Batavia, having been procured from the iſlets of Cochin-China and the Eaſt. Each caſk weighs one hundred and twenty-five pounds, and each neſt half an ounce *; hence the whole muſt amount to one hundred and twenty-five thouſand pounds, and contain four millions of neſts.

I muſt confeſs, however, that the philoſopher Redi†, judging from experiments made by others, and perhaps incomplete, entertains great doubts with regard to the reſtorative virtue of theſe neſts, which is atteſted by many other writers, who on that point agree with Poivre ‡.

Nothing better ſhews that the Salangane has remained long unknown, than the different names beſtowed on it. It is called the *Sea-Swallow* and the *Halcyon:* its wings have been ſuppoſed to be blue, and it has been repreſented as ſometimes equal in ſize to the ordinary Swallows, ſometimes as larger, ſometimes as ſmaller. In ſhort, nothing accurate was known before M. Poivre.

* *Etabliſſemens Europeens dans les Indes Orientales, t. I. liv. 2.*

† *See* the obſervations of Redi in the *Coll. Acad. part. etran. t. IV. p. 567.* If it be true, as alleged, that the Hollanders begin to import theſe neſts into Europe, the fact will be ſoon aſcertained.

‡ *Comedunt in primis ii qui in caſtris venereis ſtrenue ſe exercere volunt.* Muſæum Wormianum, *Lib. III.* 21. "It is a great reſtorative to Nature, and the luxurious Chineſe make much uſe of it." *Sprat's Hiſtory of the Royal Society of London, p.* 206.

Kircher

Kircher had aſſerted that theſe birds appear on the coaſt only in the breeding ſeaſon, and that it is uncertain where they live during the reſt of the year; but M. Poivre informs us, that they remain conſtantly in thoſe iſlets and rocks where they were hatched, and that they live like the European Swallows, only they circle rather leſs; in fact, their wings are ſomewhat ſhorter.

They have only two colours, blackiſh on the upper ſurface, and whitiſh on all the under ſurface, and alſo on the tips of the tail-quills; the iris is yellow, the bill black, and the legs brown.

It is rather ſmaller than the wren; its total length two inches three lines; the tarſus as many; the hind toe the ſhorteſt; the tail ten lines, forked three, compoſed of twelve quills, and projects three fourths of its length beyond the wings.

[A] Specific character of the *Hirundo Eſculenta*: "All its tail-quills are marked with a white ſpot."

XI.

The WHEAT SWALLOW.

La Grande Hirondelle Brune a Ventre Tacheté *, *ou Hirondelle des Bles*, Buff.
Hirundo Borbonica, Gmel.

THIS bird is uſually called the Corn Swallow in the Iſle of France; it haunts the wheat fields, the glades of the woods, and prefers the uplands; it frequently ſits on trees and on ſtones; it follows the herds, or rather the inſects which infeſt them: it is alſo ſeen, from time to time, flying in large troops behind the veſſels lying in the roads, and conſtantly in the purſuit of winged inſects; its cry is much like that of the common Swallow.

The Viſcount de Querhoent obſerved that the Wheat Swallows circled frequently in the evening near a cut which had been made in a mountain; and he thence conjectures that, like our Sand-martins and Swifts, they paſs the night in holes under ground, or in crevices of the rocks. They, no doubt, breed in the ſame retreats; which may be the reaſon that their neſts are unknown in the Iſle of France. The Viſcount de Querhoent could procure no account of their incubation but from an old perſon of the Iſle of Bourbon, and born in the country, who told him that they ſat in September and Octo-

* *i. e.* The Great Brown Swallow with a ſpotted tail.

ber, that he had caught many on their neſts in caverns and the holes of rocks, &c. that theſe are compoſed of ſtraw and a few feathers, and that he never ſaw more than two eggs, which were gray and dotted with brown.

This Swallow is as large as our Swift; the upper ſurface of its body blackiſh brown; the under ſurface gray, ſprinkled with long brown ſpots; the tail ſquare; the bill and the legs black.

VARIETY.

The Little Brown Swallow with a ſpotted tail, from the Iſle of Bourbon, muſt be regarded as a variety of ſize from the preceding ſpecies. It has alſo ſome ſlight differences of colours; the upper ſurface of its head, of its wings, and tail, is blackiſh brown; the three laſt quills of the wings are terminated with dirty white, and edged with greeniſh brown; this laſt colour ſpreads over all the reſt of the upper ſurface; the throat and all the under ſide of the body, including the inferior coverts of the tail, are marked with longitudinal brown ſpots, on a gray ground.

Total length four inches nine lines; the bill ſeven or eight lines; the tarſus ſix lines; all the nails ſhort and ſlightly hooked; the tail near two inches, ſquare, and falls about ſeven lines ſhort of the wings.

XII.

The GRAY-RUMPED SWALLOW.

La Petite Hirondelle Noire a Croupion Gris *, Buff.
Hirundo Francica, Gmel.

COMMERSON brought this new ſpecies from the Iſle of France; it is ſcarce, though there are abundance of inſects in that iſland; it is even lean, and its fleſh unpalatable; it lives indifferently in the town or the country, but always near ſprings; it is never obſerved to ſit; it flies with great celerity; it is as large as a titmouſe, and weighs two gros and a half. The Viſcount de Querhoent ſaw it frequently towards the evening in the ſkirts of the woods, and he thence infers that it chooſes the ſylvan ſhades for its nocturnal retreats.

All the upper ſurface is of an uniform blackiſh, except the rump, which is whitiſh, and this is likewiſe the colour of the under ſurface.

Total length four inches two lines; the bill five lines; the tarſus four lines; the alar extent nine inches; the tail near two inches, and, in the ſubject deſcribed by Commerſon, it had only ten quills, which were nearly equal; it is ten lines ſhorter than the wings, which conſiſt of ſeventeen or eighteen quills.

A ſpecimen brought from the Eaſt Indies by

* *i. e.* The Little Black Swallow with a gray rump.

Sonnerat,

Sonnerat, appears to me to belong to this ſpecies, or rather to form the ſhade between this ſpecies and the preceding variety; for the under ſide of the body was ſpotted like the latter, and it reſembled the former in the colour of the upper ſide of the body, and in the dimenſions; only the wings projected ſeventeen lines beyond the tail, and the nails were ſlender and hooked.

XIII.

THE

RUFOUS-RUMPED SWALLOW.

L'Hirondelle a Croupion Roux et Queue Carrée, Buff*.
Hirundo Americana, Gmel.

ALL the upper ſurface except the rump is blackiſh brown, with reflections fluctuating between brown green and deep blue; the rufous colour of the rump is a little mingled, each feather being edged with whitiſh; the quills of the tail brown; thoſe of the wings alſo brown, with ſome greeniſh reflections; the primaries edged interiorly with whitiſh, and the ſecondaries edged with the ſame colour, which riſes a little on the outſide; all the under ſurface of the body is dirty white; and the inferior coverts of the tail ruſty.

* i. e. The Swallows with a rufous rump and ſquare tail.

Total

Total length ſix inches and a half; the bill nine or ten lines; the tarſus five or ſix; the toes diſpoſed three one way and one the other; the alar extent about ten inches; the tail two inches, almoſt ſquare at the end, and a little ſhorter than the wings.

Commerſon ſaw this Swallow on the banks of the De la Plata in May 1765. He brought from the ſame country another bird which may be regarded as a variety of this ſpecies; it differed in having its throat ruſty, more white than rufous on the rump and the lower coverts of the tail; all the quills of the tail of the wings were deeper, with more diſtinct reflections; no white on the great quills of the wings, which projected ten lines beyond the tail, which was a little forked; the alar extent eleven inches.

XIV.

The SHARP-TAILED BROWN SWALLOW of LOUISIANA.

Hirundo Pelaſgia, Var. Gmel.

THERE are ſome Swallows in America whoſe tail-quills are entirely deſtitute of webs at the ends, and terminate in a point.

The preſent was brought from Louiſiana by Lebeau; its throat and the fore ſide of the neck were

were dirty white, ſpotted with greeniſh brown; all the reſt of the plumage appeared of a pretty uniform brown, eſpecially at firſt ſight; for, on a nearer inſpection, we perceive that the head and the upper ſurface of the body, including the ſuperior coverts of the wings, are of a deeper caſt; the rump and the under ſurface of the body are lighter, the wings blackiſh, edged interiorly with black; the legs are brown.

Total length four inches and three lines; the bill ſeven lines; the tarſus ſix lines; the middle toe ſix lines; the hind toe the ſhorteſt; the tail ſeventeen or eighteen lines, including the pointed ſhafts, a little rounded at the end; theſe ſhafts black, and four or five lines long; thoſe of the middle quills of the wings largeſt, and twenty-two lines ſhorter than the wings.

The American Swallow of Cateſby, and the Carolina Swallow of Briſſon *, is much ſhorter winged than that from Louiſiana, but reſembles it exactly in ſize, in its general proportions, in its plumage, and in the ſharp ſhafts; and as the climate is nearly the ſame, if the great difference in the length of the wings were not conſtant, we might regard it as a variety of the ſame ſpecies. The times of its arrival in Carolina and Virginia, and of its departure from thoſe countries, correſpond, ſays Cateſby, to the ap-

* *Hirundo Pelaſgia*, Linn. and Gmel.
The *Aculeated Swallow*, Penn. and Lath.

pearance

pearance and retreat of the Swallows in England. He ſuſpects that they winter in Brazil, and he tells us that they breed in the chimneys in Carolina.

Total length four inches and three lines; the bill five lines, the tarſus the ſame, the mid toe ſix; the tail eighteen lines, and three lines ſhorter than the wings.

The Sharp-tailed Swallow of Cayenne, called *camaria*, reſembles more that of Louiſiana, in its ſize, than that of Carolina; its wings being longer than the latter and ſhorter than the former. On the other hand, it differs rather more in its colours, for the upper ſide of the body is deeper brown, and verging on blue; the rump gray; the throat and the fore part of the neck gray, with a ruſty caſt; the under ſide of the body grayiſh ſhaded with brown; in general, the colour of the higher parts is rather brighter and more diſtinct than that of the lower. Perhaps it is a ſexual variety, eſpecially as the Cayenne Swallow has been reckoned a male.

It is ſaid in Guiana never to approach the ſettlements; and certainly it does not breed in the chimneys, for there are no chimneys in that country.

Total length four inches and ſeven lines; the bill four lines, the tarſus five; the tail twenty lines including the points, which are two or three lines; the wings extend about an inch beyond it.

XV.

The SHARP-TAILED BLACK SWALLOW of MARTINICO.

Hirundo Acuta, Gmel.
Hirundo Martinicana, Briſſ.
The *Sharp-tailed Swallow*, Lath.

IT is the ſmalleſt of all the Sharp-tailed Swallows; not larger than a gold creſted wren; the points which terminate the quills of the tail very fine.

All the upper ſide of the head and body black without any exception, the throat gray brown, and the reſt of the under ſide of the body dull brown; the bill black and the legs brown.

Total length three inches and eight lines; the bill four lines, the tarſus the ſame; the mid toe four lines and a half; the alar extent eight inches and eight lines, and eight lines ſhorter than the wings.

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